

NATIONAL LIBRARY CONFERENCES
NO. 2

**BIBLIOGRAPHICAL
CONTROL
IN INDIA**

NATIONAL LIBRARY
CALCUTTA

BIBLIOGRAPHICAL CONTROL IN INDIA

A SEMINAR, 1985

Editor :
KALPANA DASGUPTA
NATIONAL LIBRARY
CALCUTTA
1988



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FOREWORD

LOOKING back across a divide of more than three years at a Seminar which assembled at the National Library to discuss the problem of bibliographical control, I confront the memory with mixed feelings. What I remember was a free and frank discussion in which we of the National Library did not always come off looking well. But I think we gave a reasonable account of ourselves and we took very careful note of whatever the critics were saying and made our plans for a much closer working together between the two sister libraries located at the Belvedere. Much has happened since then but I do not know whether things are still the same. We have seen the submission of the National Policy on Library and Information Systems and we have just seen the submission of an action plan based on that Report by Professor Debiprasad Chattopadhyay heading the Empowered Committee, to the Hon'ble Minister, Shri Narasimha Rao, for Human Resource Development. It seems to me entirely possible that if the National Commission envisaged in the National Policy and by the Empowered Committee should begin functioning and if the National Library can build up the role assigned to it, then many of the recommendations which this Conference made, will become practicable. But between the desire and the fulfilment still falls the Shadow.

Turning to more pleasant duties I take much pleasure in thanking our colleague of the Raja Rammohun Roy Library Foundation and the Central Reference Library, Calcutta, for joining us in sponsoring the Seminar, Shri P. Venkatachari, Assistant Editor and Shri S. R. Gurnani, Assistant Editor of the Central Reference Library undertook the often thankless responsibility of acting as Rapporteurs during the Seminar and did so cheerfully. To them many thanks. The printing of this volume has been done by the Government of India Press, Publication Unit, Santragachi and we are grateful to the Manager and the staff of the Press for their work. Finally, my heartfelt gratitude to all my colleagues in the National Library for their support and their effort before the seminar, during the seminar and in printing this volume of proceedings.

Ashin Das Gupta
Director
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INTRODUCTION

Universal bibliographic control is the goal set forth for libraries on an international basis after detailed discussions and debates in international seminars and conferences at various levels. The IFLA and UNESCO have also envisaged this programme as an international possibility to achieve this and national cataloguing agencies have to be responsible for acquiring all new publications of that country, prepare cataloguing data and disseminate the national bibliographic records on an international level.

There have been various steps for achieving this goal and within the last few decades Librarians and Information Scientists have tried to achieve bibliographic control for the 'Creation, development, organisation, management and exploitation of records prepared firstly to describe items held in libraries or on databases and secondly to facilitate user access to such items' in their respective countries. The publication of AACR-II, establishment of the international standard bibliographic description and the development of machine readable cataloguing formats were steps taken to achieve bibliographic control on a global basis.

In India, even though printing presses were established almost two hundred years ago and as a sequel publication of books were begun, the first step in organising a data control over the books published, was in 1867, when the Press and Registration of Books Act was passed. Granting that the Act was brought in for bureaucratic purposes by the then Imperial Government and not as a cultural feedback for publishing records, it did help the persons and agencies associated with the book world. India with its multiplicity of languages in which books were published, did create a problem for a pan-Indian approach.

After independence the government and its agencies was responsible for a very large growth in government publication in addition to the publications emanating from private publishers and individuals. The launching of the Indian National Bibliography, soon after the passage of the Delivery of Books Act, 1954 and its amendment in 1956 was a bold step in independent India's programme for bibliographic control.

Presently the major problems in achieving bibliographic control are two-fold in nature.

1. *Lack of bibliographic control in publishing :*

In India it is not possible to know *what* is being published *where* and *by whom*. There are no authentic and exhaustive directories of publishers or proper catalogues of new publications. The language publishing sector suffers from this malady more than the English publishing sector. In many of our language areas there are author publishers and small publishers who have very little resources for preparing catalogues regularly and for advertising their publications regularly.

2. *Bibliographic control of reading materials available in major libraries in India :*

This is an area which concerns librarians and Information Scientists throughout India because till date none of us really know which library has what in its collection.

With the advent of technology in library management and services, a whole new world has opened to professional librarians. Both positive and negative experiences of the western world which has experienced automated library systems for few decades, can help the developing countries to avoid the pitfalls and work out modalities to suit their requirements and resources. It is with the help of new technology that one can now expect bibliographic control of an universal nature to become a reality. But the pre-requisite for automated systems is standardised processing systems, machine readable formats as well compatible hardware and software systems. These will have to be ascertained by all librarians and information scientists before we consider automating library activities for national linkages and global networks.

Keeping all this in view and with a wish to review the existing situation and to formulate new programmes the National Library sponsored this National Seminar. These would cover a whole range of bibliographic activities such as 'complete bibliographic records of all bibliographic items as published ; standardization of bibliographic description, provision of physical access through the compilation and distribution of Union lists and subject bibliographies and through bibliographic centres'. The seminar took cognizance of the international as well as national efforts for achieving bibliographic control in the Indian context.

Papers were invited not only from library professionals but also from specialists in language areas, book publishing organisations, library technologists, government officials who assist in the decision making process and academics to cover all the facets of bibliographic control.

More than twenty papers were presented and nearly twice that number actively participated in the discussions. After two days of intensive debate a set of recommendations have been drawn to facilitate the agencies concerned for a meaningful follow-up of the programme.

Since the articles presented at the Seminar are by eminent Librarians and Information Scientists, important academics and bureaucrats concerned in decision making, this compilation covers a large spectrum of topics related to the problem of Bibliographical Control. This, therefore, is more than just a Seminar Proceedings in the usual sense of the term. It will be of interest to all who are concerned with this universal problem.

Librarian
Kalpna Das Gupta

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OVERVIEW OF THE NATIONAL SEMINAR
ON
'BIBLIOGRAPHIC CONTROL IN INDIA'

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The dream of achieving Universal Bibliographic Control has been the obsession of librarians and information scientists for a considerable period of time. International organisations like the UNESCO and IFLA have made valuable contributions for achievement of this goal. Librarians and information scientists have made conscious efforts to attain Universal Bibliographic Control through local resource sharing by developing national bibliographic infrastructure as well as international cooperation and assistance. But at every step we have been conscious of this undisputable fact that before Universal Bibliographic Control can be a reality we will have to create workable and compatible national bibliographic mechanisms which can eventually become the contributing component of a worldwide information system. Towards this end more and more efforts have to be made so that we accomplish national and regional self sufficiency in bibliographic control.

Every country has tried to work out its own bibliographic territory but librarians and information scientists have faced numerous obstacles which are cultural, political, economic and technological in nature. These obstacles have mainly been deterrents in achieving the goal of national bibliographic control in most of the developing countries. India is no exception to this rule. The written material of India reflects the diverse cultural and social history of India which makes the task of developing a national standardised bibliographic system very difficult. But we all know that with a cooperative venture between professional skills and technological development such a network cannot be an impossibility.

In the Indian context the efforts of bibliographic control are varied in nature. This seminar will try to examine all such efforts and look into the future for evolving a system which will eventually bring about standardised national bibliographic control. In the past more than a century fragmented efforts have been made by learned individuals, different organisations, and state Governments in bringing about some kind of bibliographic control in the context of available written material. The Press and Registration Act of 1867 was a step in this direction. I shall come to the Acts later as they need special attention. This area of retrospective biblio-

graphical efforts have to be understood well to plan any system for the future.

The Indian National Bibliography was a major step in the direction of systematic National Bibliographic Control in India. The Delivery of Books Act of 1954 triggered off the possibility of the compilation of the Indian National Bibliography by the National Library taking the books supplied under the said act. In 1958 the first of INB was published and it is now being brought out by the Central Reference Library which is also under the same Ministry. The publication of INB has not been a very smooth operation. The diversity of Indian languages, incomplete coverage and lack of standardised processing system has made it almost impossible to bring about a National Bibliography in the real sense of the term.

The other major area of contention is the virtual failure of the D.B. Act of 1954. This Act was enacted in 1954 and thereafter amended in 1956 to include newspapers and periodicals. It was expected that all published material in India will be deposited in the National Library at Calcutta and in three public libraries at Bombay, Madras and Delhi. It is very strange that in India there are 3 (three) similar Acts in vogue simultaneously. The Press and Registration Act of 1867, the Delivery of Books Act of 1954 and the Copyright Act of 1957 all expect the publishers/printers to deposit number of copies or to send information to different libraries or agencies for bibliographic control of some kind, to result out of each of them. But contrary to all expectations some of the Acts do what is expected since none of them have any foolproof system of operation. They are confusing not only to publishers/printers but have proved to be the main bone of contention between the book industry and actual efforts for bibliographic control in India. Since the INB coverage is solely dependant on the receipts of the National Library under the D. B. Act, the gaps in coverage are glaring. Moreover, till date the actual scope and coverage of INB as a National Bibliography has not been well planned and well defined.

It is expected that this seminar will be able to make concrete proposals regarding the possibility of bridging the gap in coverage in the INB. To bridge the gap in the INB ways and means have to be evolved to increase the actual receipt of publications in the National Library under the D.B. Act. The gap is not only in INB but it is also in the awareness of what is actually published in the country and what finally gets place in the largest libraries of the country. It seems to be almost an all pervading blissful ignorance. Some scholars, publishers and librarians are trying to bridge the gaps within their own limited resources but an all India effort is yet to start.

IFLA in its Annual Conference in 1973 which dealt specifically with problems related to UBC defined UBC as "the systematic handling of bibliographical data from the time a book is printed anywhere in the world until its cataloguing by libraries". For systematic and standardised processing of a book from the time it is printed several developments have taken place. The ISBD and the developments of numbering each publication i.e. ISBN and ISSN and ISSD as well as the automatic provision of cataloguing under the MARC programme are all closely connected to the goal of UBC. Since all these developments are closely connected, the National Bibliographic set up will have to prepare itself to keep pace with this new wave of change. ISBD and related developments represent the major effort towards the standardised processing of each bibliographic unit. Unless our National Bibliographical efforts are geared to match this development, we will be very confused because we will not be able to hold on to the old system for ever and we will not be prepared to replace it with the new order.

The need for application of new technology for achieving the goal of National Bibliographic Control and eventually the Universal Bibliographic Control cannot be over-emphasised. The explosion in research, the new technological development in publishing and book supply must be matched by our power to control the mass of data thus created. The standardised/centralised automatic provision of cataloguing, automated publishing of the INB are pre-requisites to any form of National Bibliographic Control. As it was agreed at the IFLA Conference of 1973 all current National bibliographies must be the building blocks of UBC. In Indian situation to bring about one standardised system of processing will be a herculean task. But in Indian condition the National Bibliographic agency may have to work in conjunction with many official and non-official agencies to bring this about. For this, machine readable data bases will have to be generated in a standardised format.

I conclude by making some points which I feel should evolve in concrete form of proposals from this august body.

- (1) The methodology for having a standardised processing system as a pre-requisite for National Bibliographic Control.
- (2) The alteration/modifications in the different Acts to enable proper flow of books to the National Library for preparation of the INB.
- (3) Define the scope and coverage of INB.
- (4) Methodology of standardised retrospective bibliographies and Union Catalogue.
- (5) Feasibility of standardised Automated bibliographic system for the INB and National Library in conjunction with other large collections in India.

NATIONAL BIBLIOGRAPHIC CONTROL : PROBLEMS, PERSPECTIVES AND NEEDS

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Introduction :

Bibliographic control is defined to mean the mastery over written and published records which is provided by and for the purposes of bibliography. Effective bibliographic control is needed to ensure access to sources of recorded information or knowledge.

Information is a vital resource for the development of the individual and the society. It is the responsibility of the national government to ensure that all people engaged in political, economic, scientific, educational, social or cultural activities receive the necessary information enabling them to render their fullest contribution to the society. Since knowledge is universal there should be no bar to free flow of information from one country to another country or from one region to another. Bibliographies are the basic instruments for searching and location of documents or retrieval of recorded information. Universal bibliographic control is a condition precedent for universal availability of publications. It is possible to establish universal bibliographic control only when all the countries have developed systems for comprehensive national bibliographic control

Problems of National Bibliographic Control :

A complete national bibliographic control involves two operations : (a) the production of a current bibliography on a regular and continuing basis, and (b) the preparation of a retrospective bibliography of the recorded documents of the period preceding the current national bibliography.

Compilation of a comprehensive current national bibliography is beset with many difficulties, specially in a multi-lingual country like India. It involves the establishment of a permanent machinery with adequate financial support. Secondly, it is to be ensured through legal deposit collection that full information is available to the compilers. Thirdly, basic policy decision is needed as to the method of arrangement, frequency, cumulative

* This paper is partially based on his report to the working group of the foundation on National Policy on Library Information System.

pattern and physical format. Finally, it is to be ensured that the current national bibliography is brought out on time for better utility.

The problems of retrospective bibliography are much more than those of current bibliography. It takes a long time to compile, needs massive investment of resources and a great deal of effort. It involves the study of the production of the press from the date when the first book was printed in the country. The collections of national library and other important libraries of the country may form the basis of retrospective bibliography. Printed catalogues of those libraries and different subject bibliographies compiled by individual efforts and research institutions may serve as retrospective bibliography during the interim period or till a comprehensive retrospective national bibliography is compiled.

Apart from retrospective and current national bibliographies and national library catalogues, general bibliographies also serve as important tools for bibliographic control. The general bibliographies are in the nature of bibliography of bibliographies, literature guides, books-in-print, select lists, directories, indexes, dictionaries, etc. It is to be noted that subject bibliographies and documentation lists containing comprehensive references to monographs, thesis, seminar papers and articles in periodicals are more useful to the scholars than general bibliographies.

International Developments :

A. International Federation for Documentation (FID)

The concept of universal bibliographic control was first mooted by Institute Internationale de Bibliographie founded by Henry La Fontaine and Paul Otlet in Brussels in 1895. The Institute lived on in transmuted form as the International Federation for Documentation (renamed in 1938) in whose charge the maintenance and development of Universal Decimal Classification (UDC) is vested. Its headquarters is now located in the Hague. Under its auspices was held the first International Conference on Documentation which noted that universal bibliographic control presupposes the existence of comprehensive national bibliographies and urged upon the governments to adopt legislation regarding legal deposit of publications to facilitate the production of national bibliography.

B. United Nations Educational Scientific and Cultural Organisation (UNESCO)

It is UNESCO which has made the greatest contribution in bringing the concept of universal bibliographic control to the domain of reality. In 1950 UNESCO sponsored a conference in Paris on the Improvement

of Bibliographic Sources. The Conference recommended specific courses of action for the development of bibliographical services both national and international. It also urged upon the governments to set up national bibliographical centres and to enact law for obligatory deposit of publications. UNESCO also sponsored a project of survey of Bibliographic Services throughout the World since 1950. As facilities and infrastructures for national bibliographies developed in course of the years, UNESCO has shifted its emphasis in the recent years from the development of individual systems to the standardisation of practices and procedures. It is supporting IFLA and FID in this direction. The UNESCO/IFLA International Congress on National Bibliographies was held in Paris in 1977. It recommended adoption of uniform principles for bibliographic description as preparatory steps for universal bibliographic control. The recommendations are embodied in the guidelines for the National Bibliographic Agency and the National Bibliography issued in 1979. Another celebrated work in this area is the Manual of Bibliographic Control compiled by IFLA for UNESCO. The Manual outlines the objectives and requirements of national bibliographic control and the functions of a national bibliographic agency. The topics covered are : bibliographic control, acquiring national publications, producing the national bibliography, preparation of bibliographic records, participation in international numbering schemes and information systems and further tools of bibliographic control. It contains two invaluable indexes : (I) an international framework for the national bibliographic agency : agreed objectives, functions, basis ; and (II) samples of documents and bibliographic records.

C. International Federation of Library Associations and Institutions (IFLA)

IFLA sponsored a major project called Universal Bibliographic Control (UBC), as concomitant to the project of Universal Availability of Publications (UAP), with UNESCO support since 1971. It aims to develop standard procedures for cataloguing, bibliographic description and the compilation of bibliographies with a view to computerising the bibliographical records and facilitating their international dissemination. It has since developed a series of International Standard Bibliographic Descriptions (ISBDs) for monographs, serials, maps, non-book materials, printed music, etc.

Mention may be made here of the contributions made by other agencies in the field of standardisation of bibliographic data, e.g., International Standard Book Numbers (ISBN) sponsored by the International Book Numbering Agency, Berlin and International Standard Serial Numbers (ISSN) by the International Serials Data System, Paris.

Another significant programme of IFLA in this context is International MARC (Machine Readable Catalogue) Project. MARC formats were first devised by the Library of Congress and the British Library Bibliographic Services Division, but have been and are being adopted by most of the developed countries and some of the developing countries. In order to facilitate the exchange of bibliographic records among the countries a new format known as Universal Machine Readable Catalogue (UNIMARC) is being developed for the conversion of national MARC formats into UNIMARC format. IFLA has included the International MARC Project as one of its core programmes to help develop the International MARC network. ISBD standards and MARC projects are positive steps towards Universal Bibliographic Control.

D. Recommendations of the Meeting of the Directors of National Libraries, Lausanne, 1976

The Directors of National Libraries meeting at Lausanne in 1976 issued a policy statement regarding the role of National Libraries in the context of International Information System. It recognised that national libraries have special responsibility for "national bibliographic control" and direct interest in the international programme for Universal Bibliographic Control (UBC) and related projects, viz., (a) promotion of improved national arrangements for the production and distribution of national bibliographic records, (b) International Serials Data System (ISDS), (c) International Standard Book Number (ISBN) Scheme, (d) national Machine Readable Catalogue (MARC) projects and associated exchange arrangements, (e) agreement and implementation of relevant bibliographic standards. The exchange of bibliographic records with other countries will enable a nation to obtain the benefits of awareness and use of materials published elsewhere.

National Developments :

A. Central Reference Library—INB

It appears that the Government of India was influenced by the programme of bibliographic development launched by UNESCO following the Paris Conference in 1950. It vested the responsibility of producing Indian National Bibliography (INB) in the Central Reference Library established in 1955. It produces the current national bibliography of India on the basis of materials received by the National Library under the Delivery of Books and Newspapers Act. Originally Librarian of the National Library was the Librarian Incharge of the Central Reference Library and the General Editor of the Indian National Bibliography. Subsequently, the institution has been declared as a separate subordinate office under the Department of Scientific Research and Cultural Affairs, now the Department of Culture.

B. Delivery of Books Act, 1954

According to UNESCO guidelines, the current national bibliography is to be compiled on the basis of materials received under a deposit law. Accordingly, the Delivery of Books Act was passed in 1954. The Act has made it obligatory on the part of every publisher in India to deposit, free of cost, a copy of the publication with the National Library and three other public libraries within 30 days from the date of issue of the publication. The Act was amended in 1956 so as to include newspapers. The other three public libraries are: (I) Connemara Public Library, Madras, (II) Asiatic Society Library, Bombay and (III) Delhi Public Library, Delhi.

C. Press & Registration of Books Act, 1867

This Act is a Central Act which may be adopted and extended by a state within its territorial jurisdiction. It empowers the State Government to demand from a printer or publisher of a book to submit the specified number of copies of a book free of cost to an authorised officer of the State Government within one calendar month after the date of the publication of the book. Similarly, the State Government may ask for from the printer of every newspaper, the submission of two copies of each issue of a newspaper free of cost as soon as it is published. This Act has been adopted by some states separately and/or under the respective Public Library Acts. It facilitates collection and preservation of regional language books and other locally published books in the State Central Libraries. Thus, the Act has some relevance to the bibliographic control of publications at the state level.

D. National Library

The Reviewing Committee of the National Library or Jha Committee appointed by the Government of India in 1968 recommended that the National Library's functions should include, among others, rendering of bibliographical and documentation services of current and retrospective material, both general and specialised. Again, the National Library of India Bill, 1976* stipulated that part of the functions of the National Library Board would be preparation of bibliographies and descriptive catalogues. At present the Bibliography Division of the National Library prepares Bibliography of Indology and supplies information to UNESCO for making entries in their projects Index Translationum, Bibliographical Services throughout the World and other publications.

E. Raja Rammohun Roy Library Foundation

Raja Rammohun Roy Library Foundation was established in 1972 as an autonomous organisation with its registered headquarters located in

* This could not be enacted due to controversies it generated.

the National Library campus. Some of the objectives of the Foundation are stated to be supporting compilation of National Union Catalogue of holdings of libraries and supporting compilation and publication of subject bibliographies and documentation lists. Thus, the Foundation is also expected to play some role in supporting projects for bibliographic control and service.

F. Research Organisations & Documentation Centres

Since Independence the Government of India has set up a number of research organisations, academies and institutions viz., Council of Scientific and Industrial Research, Indian Council of Medical Research, Indian Council of Agricultural Research, Indian Council of Social Science Research, Indian Council of Historical Research, Indian Council of Philosophical Research, Sahitya Akademi, etc. Some of these organisations have established national level libraries, documentation centres, national institutes and specialised institutions. Notable examples are Indian National Scientific Documentation Centre (INSDOC) and Social Science Documentation Centre (SSDC). They have been rendering significant bibliographical services to scientists and scholars in the respective subject fields. Contributions of some universities, learned societies and individuals cannot also be ignored.

G. Raja Rammohun Roy Resource Centre, New Delhi

It is an institution under the Book Promotion Division of the Ministry of Education engaged in the development of University level text books and resource materials. The Institution has been selected as ISBN agency for India.

H. Indian Library Association Seminar on Bibliographical Organisation and Control, 1961

The seminar recommended that there should be a permanent policy advisory committee and a national co-ordinating body to ensure effective bibliographical control over the recorded information in the country.

Deficiencies and Needs

Our current national bibliography or I.N.B. is defective in so far as its coverage is not comprehensive and its publication is delayed. It is estimated that about 20% to 30% significant publications of the country are not covered by it due to non-receipt of books by the National Library under the Delivery of Books & Newspapers Act. INB tends to lose utility on account of late publication. An ideal current national bibliography is one which includes entries of books within one year of their publications. An upto-date INB can serve as guide to the libraries in processing them

documents, as a major tool for book selection and literature search and as an instrument of information retrieval. So the basic issue is how to make INB comprehensive and upto-date.

The fault does not, however, lie with the Central reference library but with the operation of the Delivery of Books and Newspapers Act. Lack of consciousness among the publishers, ignorance of legal obligation on the part of new publishers, lack of suitable tools for locating the defaulters, insignificant penalty for non-submission of books, lack of proper vigilance on the part of the deposit libraries, unwelcome necessity for submitting several copies under the Delivery of Books Act and under the Press and Registration of Books Act, high postal rates, etc. are some of the factors which contribute to the incomplete collection of materials. The loopholes of the Act need to be plugged.

A current national bibliography is only one aspect of national bibliographic control; the old materials should also be brought under control for effective use and exploitation. Neither the National Library nor the Central Reference Library is engaged in the production of retrospective bibliography. To begin with, a project for the preparation of a National Union Catalogue of major research libraries may be undertaken.

A national information system should aim at the control and transfer of all recorded information. Non-book materials, serials, manuscripts and archival materials, maps, etc. are not controlled by the national bibliography. They deserve to be listed in supplementary bibliographies.

Bibliographic activities of different organisations and institutions are not co-ordinated. There is no central co-ordinating body to guide or lead such activities. This may sometimes lead to duplication of works and effort. This is an area where a central agency can play an effective role. In fact this is one of the important activities of a National Library. In some countries bibliographic projects are to be first registered with the National Library. The same practice should be adopted and followed in our country.

One example of avoidable duplication of work is provided by CRI and NL. Books received under the Delivery of Books Act are processed twice—one by CRI for INB and again by NL for catalogues. There is need for closer integration between CRI and the Bibliography Division of the National Library.

India is a multi-lingual country and books are produced in several languages. INB covers 14 languages. But publications in smaller languages

are increasing day by day. The scope of INB should be widened to cover those areas.

There is also need for proper research in bibliographical problems. It is all the more necessary in a multi-lingual country like India where books are produced in several languages and scripts and where large stocks of manuscripts are available. Adoption of standardised bibliographic description or ISBDs is another area which needs urgent attention. UNESCO studies have shown that ISBDs can as well be applied to publications in Non-Roman scripts.

Efforts are also needed to computerise INB or to devise an Indian MARC format for storage of bibliographic information keeping in view its hospitality to international practices. This will facilitate speedy retrieval and exchange of bibliographic information. If information technology is not introduced in time there is the danger that our sources of national information will be recorded by outside organisations which will then be in a position to sell them to us. India cannot and should not remain an "information poor" country for long. CRL has taken steps to make INB upto-date as far as practicable ; it should now go in for computerisation for effective utilisation of bibliographic resources of the country.

The modernisation of bibliographical organisation calls for trained personnel for efficient handling of bibliographic materials. This needs to be organised by the central bibliographical agency.

Any national programme of bibliographic control and organisation cannot be divorced from bibliographic service. It is desirable that a printed catalogue card service is started by the central bibliographic agency in order to minimise the processing problems of individual libraries.

There has been no survey regarding the use of INB by Indian scholars and institutions for selection or location of books. A programme of users' education for effective use and consultation of INB is of prime necessity.

The scholars would very much appreciate if any central agency could render bibliographic reference and information service to them. What the country lacks is a central nodal point or a referral centre for bibliographic information.

Recommendations of RRRLF :

Raja Rammohun Roy Library Foundation studied the problems while formulating a national policy on library and information system for consideration of and adoption by the Government. The recommendation of the Foundation goes as follows :

"In order to establish bibliographical control over the nation's intellectual output for effective retrieval of information, co-ordinate bibliographic activities of different agencies, carry out bibliographical research and render bibliographical service to serious readers, a national bibliographical centre in the national library will be maintained and developed. This centre will serve as referral centre for bibliographic information. Apart from the production of INB, the centre will also produce retrospective bibliography and other general bibliographies. Subject bibliographies will be prepared by Subject National Libraries, research organisations and institutions on specific areas of research."

The above recommendation has been made keeping the Bibliographic Services Division of the British Library as the model. It also took into consideration the recommendations of the Reviewing Committee of the National Library appointed in 1968 and the provisions of the National Library of India Bill, 1976

The development of a national bibliographical centre within the National Library system will contribute greatly to the modernisation of bibliographical activities in the country. If need be, a foreign expert or consultant may be appointed to build up this centre at the initial stage. The functions of the national bibliographical centre would be :—

- (i) to prepare current national bibliography or INB ;
- (ii) to prepare retrospective bibliography ;
- (iii) to prepare a national union catalogue of major libraries ;
- (iv) to prepare general bibliographies and special bibliographies ;
- (v) to promote library co-operation for bibliographic activities ;
- (vi) to render bibliographic information service ;
- (vii) to undertake and sponsor bibliographic research ;
- (viii) to adopt and promote adoption of international bibliographic standards ;
- (ix) to computerise INB and to develop an Indian MARC format ;
- (x) to exchange bibliographic records with other countries by agreements ;
- (xi) to participate in international bibliographic projects and systems ;
- (xii) to co-ordinate bibliographic activities of different institutions, organisations and individuals ;

- (xiii) to function as a central bibliographic referral centre ;
- (xiv) to render training in bibliography ;
- (xv) to undertake user education programmes ; and
- (xvi) to undertake any other activity conducive to the promotion of bibliographical services in the country.

A national bibliographical centre with a permanent policy advisory committee will be able to ensure effective national bibliographical control in the country.

Conclusion :

Bibliographic control is a means to an end. It facilitates access to the sources of information. Effective national bibliographic control will pave the way to effective universal bibliographic control. This will ensure free flow of information among the nations and peoples. The ultimate goal is to ensure that all individuals in the world should be able to obtain for personal use any publication, wherever and whenever published, either in original or in copy. This is the basis of the concept and programme of Universal Availability of Publications (UAP) adopted by IFLA with the support of UNESCO. This is in line with the projected national library and information policy that information should be provided to all possible users as fully, promptly, cheaply and conveniently as possible.

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BIBLIOGRAPHICAL CONTROL OF RETROSPECTIVE MATERIAL PUBLISHED OR WRITTEN IN INDIA UPTO 1958

**BIBLIOGRAPHY DIVISIONS
National Library, Calcutta**

National Bibliographical Control & its Complexities :

With the enactment of the Delivery of Books (Public Libraries) Act, 1954 (amended in 1956), the National Library, Calcutta, became the centre for bibliographical control of Indian publications, and the compilation and publication of the current national bibliography of India were taken care of. Slightly earlier, under an executive order of the Government of India, 1953-54, the National Library had become entitled to receive one copy each of all publications published in the country and deposited under the provisions of the Press and Registration of Books Act, 1867. But for the retrospective national bibliography of India, there was no unified national effort though, during the past one hundred and fifty years, individual enthusiasts or organisations greatly contributed towards such bibliographical control. A retrospective national bibliography of India must start with the earliest extant Indian manuscripts—a task which, in the context of a country of such old culture and civilisation, with diverse languages and scripts, with the earliest known extant work *Rigveda* dating (with obvious controversies) to the middle of the 2nd millennium B. C., is formidable. The complexity of the task becomes further enhanced first because numerous originals have been irretrievably lost or lost to India or are available only in translations and second because many valuable books are in private hands and, sometimes, even the most well-known scholars simply knock against the wall in trying to have access to them. The great many printed catalogues of ancient Indian works available in India and abroad—for instance, in Cambridge, Oxford, Moscow, Leningrad, Tashkent, etc. etc.—encourage us that bibliographical control of these works by compiling a register, in chronological order, of all available Indian manuscripts, though of cyclopaedic proportion, is very much feasible.

II

Available Bibliographical Studies :

The post-printing era in Indian bibliography is, comparatively, fraught with lesser difficulties. Numerous studies published on the history of printing in India list, date-wise and language-wise, the Indian “incunabulae” and early printed books.

Katherine Diehl's *Early Indian Imprints* (1964) has a good coverage upto 1850, though restricted to collections at the Carey Historical Library of Serampore College ; but, as she puts it, "by 1850 there were the beginnings of systematic histories of missionary printing, attempts to tally books by subject fields, by language groups, and by both quality and quantity... Bibliographies compiled between 1850 and 1875, while incomplete in some respects, are more factual about these early publications than are the histories and criticisms written during the next hundred years".

Despite such general remarks, many valuable books and articles published on the subject contribute to bibliographical control of these early Indian imprints. The National Library's brochure *The Carey Exhibition of Early Printing and Fine Printing* (1955) starts with a brief note on early printing in India, followed by a select bibliography. This bibliography lists such papers as T. D. Waksis's *Early Printed Books in Gujarati*, R. S. Parkhi's *Early Marathi Printing in India*, W. H. Warren's *Early Tamil Printing*, S. C. Guha's *Early Bengali Printing on Paper*. J. S. M. Hooper's *Bible in India* also serves as a sort of a checklist on various early Indian languages' imprints of the Bible. G. A. Grierson's *Early Publications of Serampore Missionaries*, a contribution to Indian bibliography from Bombay in 1903, also adds to the list.

Dr. J. Mangamma's *Book Printing of India* is written with special reference to the contribution of European scholars to Telugu (1746-1857) and lists not only a large number of early printed books in Telugu but also valuable literature on the subject. We would also like to mention here the book *Hindi ke adi mudrita grantha* [Early Printed Books of Hindi] by Krishnacharya who, for several years, was the head of the Hindi Division of the National Library. No scholar of history of early printing in India can belittle the significant contributions of the well-known French Indologist, Garcin de Tassy, and of the eminent scholar, G. A. Grierson. Garcin de Tassy, in 1874, 2nd ed. (date of 1st ed.) published, in French, a survey of Hindustan language and literature from 1850 to 1869. *Grierson's Modern Vernacular Literature of Hindustan* was published from Calcutta in 1889.

As regards Bengali books, C. R. Banerji's *Dui sataker Bangla mudran o prakashan* (Calcutta, 1981) [Bengali printing and publishing over two centuries] is a remarkable venture on the subject. Much earlier, the famous Rev. James Long had listed early printed Bengali books and this list is available as an appendix in Dinesh Chandra Sen's *Vangabhasa o sahitya* (5th ed. Calcutta, 1927).

The Selections from the Records of Bengal Govt. (No. 32) contain James Long's *Returns Relating to Publications in the Bengali Language, in*

1857. These also include A. J. Arbuthnot's books and pamphlets printed and published in the town of Madras during the year 1855. Of course, only a bit earlier, James Long had brought out his descriptive catalogue containing a classified list of 1,400 Bengali books and pamphlets, Calcutta, 1855. Obviously enough, the Asiatic Society (estd. 1784) and Bangiya Sahitya Parishad (estd. in 1893) have a great deal of early printed Bengali books and their lists are equally important source in this regard.

This is in no way a comprehensive bibliography, yet mention must be made here of the classified list of Gujarati books published by Pustakalaya Sahayak Sevakari Mandal from Baroda (1929), reference guide to Tamil studies published from Kuala Lumpur in 1966, Madras State Tamil Bibliography (1867-1900) brought out by Tamil Development and Research Council, Madras. It is a matter of delight to note that the early printed Marathi books have since been comprehensively listed in *Marathi Grantha Suci* [Bibliography of Books in Marathi] published during 1800 to 1967, under the editorship of S. R. Date. Over six decades back, a similar venture had been undertaken by Y. R. K. Date and R. T. Desmukh whose coverage is from 1810 to 1917.

There are similar ventures in many other Indian languages ; and there is now a need for compiling a comprehensive bibliography of all such material.

An authentic study (specially for the Indian "incunabulae") of the Printing Press in India (being a quartercentenary commemoration study of the advent of printing in India) is by A. K. Priolkar, published in 1958 from Marathi Samshodhana Mandala, Bombay. In 1966 Priolkar published a bibliography of Marathi incunabulae. These vast efforts, of course, now culminate in a further painstaking study by Shri B. S. Kesavan, the former Librarian of the National Library. All such material assuredly provides a good plinth for a bibliographical control of Indian publications of this period.

III

Role of National Library in Bibliographical Control :

The 19th century, specially the period after the first quarter, and then the 20th century, see a big spurt in the number of publications ; and these, or their records are available in such diverse places or publications that, without first a comprehensive, systematic bibliography of the sources for these data, any investigator may be expending much valuable time and energy in finding his way.

As earlier mentioned, under an executive order of the Government of India, in 1953-54, the National Library had started enjoying the advantages

of the Press and Registration of Books Act, 1867. The bibliographical control for the pre-1953 period (going back to 1901) was, though in a limited way, thoughtfully taken care of in the ambitious project of the National Bibliography of Indian Literature (1901-1953) under the aegis of the Sahitya Akademi. This Bibliography was not meant to be comprehensive, and was to cover all publications of literary merit, as also works of abiding value which came under the purview of Humanities. But even with these limitations, the Bibliography has been proving its usefulness as an important reference source. The Librarian, National Library, was not only the technical adviser of the project but also the general editor of the work, and the sections on English, Sanskrit and Oriya were compiled by the National Library. The entries in English alone total 16,500. Rightly so! After all, for a retrospective bibliography of Indian publications prior to 1958, no other institution/library can claim to have such vast sources and resources as the National Library does.

Having its origins in the Calcutta Public Library (estd. 1836), the Library got 4,675 volumes from the Library of the College of Fort William, books from the Library of the Home Department containing books from the East India College Library and the East India Board Library, collections of the Zamindar of Buhar consisting of rich collection of books and manuscripts in Arabic, Persian and Urdu, books received as gift from the Maharaja of Tripura and from numerous other Government departments and individuals. What is more, the Library had an offer from the Bengal Government from the very beginning to ask for any book, free of cost, received by the Government under the provisions of the Press and Registration of Books Act.

Provenance of Retrospective National Bibliography :

When today we take a bird's eye-view of the sources on which we can count for a retrospective national bibliography of India, we become ever more conscious of the richness of the collections of the National Library. None will disagree that the first basic tool for such a retrospective exercise has, of necessity, to be the British Museum General Catalogue of Printed Books, along with the Catalogues of the British Museum Department of Oriental Printed Books and Manuscripts—Hindustani (1889, Suppl. 1909), Kannada etc (1910), Sanskrit, Pali and Prakrit (1893, Suppl. 1928), Hindi, Punjabi, Sindhi and Pushtu (1893), Arabic (1894-1901; 1926), Bengali (1910), Assamese (1903), Malayalam, etc. (1971), Tamil (1909; Suppl. 1931 & 1979*), Marathi and Gujarati (1892; Suppl. 1915), and numerous other supplements.

*Another supplementary catalogue of Tamil publications, edited by Albertine Gaur was published by the British Library in 1979.—*Editor*.

B. Edward's Catalogue of the Persian printed books in the British Museum would also have to be sifted to see what Persian books printed in India are included there and the British Museum Index-catalogue of Indian Official Publications (1900) to survey the official documents. The same importance as a basic working tool is of the Catalogue (1888-1919) of the library of the India Office (now a part of the British Library), with specific volumes devoted to Bengali, Hindi, Hindusthani, Marathi and Gujarati, Oriya and Assamese, Panjabi and Pushtu, Sanskrit, Sindhi, etc., and of catalogues of Oriental Collections in various libraries of the world.

State Government Sources :

The next important tools are the lists of books issued by various states for books deposited under the provisions of the Press and Registration of Books Act 1867—for instance, the quarterly lists of books and pamphlets issued by the office of the Director of Public Instruction and Registrar of Books, Assam ; by the Registrar of Publications and Keeper of the Catalogue of Books, for the Presidency of Bengal ; by the Examiner of Books and Publications, Bombay, for the Bombay province ; by the Director of Public Instruction, Hyderabad Presidency, for books registered in the Hyderabad assigned districts ; by the authorities in Madhya Pradesh, Punjab, Delhi Province, Cochin State, Mysore Province, Coorg Provinces (afterwards : state) of Orissa and again in the province of Bihar and Orissa, Ajmere-Merwaro, Province of Sindh etc. etc. As regards Government publications, lists were issued by the Superintendent, Government Printing, Calcutta, for all publications of Government of India, and by various Local Government and Administration for Government publications of respective areas. Such, for instance, are the catalogues of publications issued by the Government of Uttar Pradesh, office of the Superintendent, Government Press, Bihar and Orissa (afterwards Bihar and Orissa Book Depot, Bihar Book Depot), the Chief Commissioner, Delhi, etc. The British Museum Index catalogue of Indian official publications in the Library of British Museum, published in 1900, and containing about 15,000 entries, is also an important reference too.

Apart from these lists of publications issued by various states for publications deposited under the provisions of the Press and Registration of Books Act, numerous Government departments and educational institutions all over India thought it proper to bring out printed catalogues of their collections or parts thereof. Such catalogues dating from late 19th and early 20th century are valuable source material for Indian publications prior to that time. This is not the place for listing all these ; but we have in mind here the catalogues, for instance, of the libraries of the Foreign Department, Bengal Legislative Council, Bengal Legislative Department, Bengal, Bombay and Madras Secretariats, Central Secretariat, or of the Calcutta, Bombay, Madras and Punjab (etc.) Universities, of the Islamia

College, Calcutta Madrasah, Presidency College, Sanskrit College, Hooghly College (all at Calcutta), Ravenshaw College, Cuttack, Presidency College, Madras ; etc., and of old public libraries like the Bangiya Sahitya Parishad, Uttarpara Jaikrishna Public Library, Panjab Public Library, Connemara Public Library, Allahabad Public Library, Khuda Baksh Oriental Public Library, and of such remarkably prestigious institutions as the Asiatic Society, Calcutta, Bhandarkar Oriental Research Institute, Poona, and even of prestigious clubs like the India Club, Calcutta Club, etc.

It is interesting to observe how valuable also are the catalogues brought out by seemingly obscure or comparatively less known institutions or establishments, like the Catalogue (1919) of the Military Library of the 9th (Secundrabad) Division, Bangalore ; the Srinivasa Mandiram and Charities Catalogue (1899) of Books of the Oriental and Mixed Library, Bangalore ; the Index Catalogue (1910) of the books in the Laxmi-vilasa Library, Baroda ; the Catalogue (1895) of the Bhuleshwar Library, Bombay ; Bhau Daji Memorial Catalogue of Manuscripts and Books (Bombay, 1882) ; Catalogue (1895-98) of the Fort Library, Bombay.

Individual Bibliographical Efforts :

There have also been laudable attempts by individual enthusiasts or organisations to prepare and bring out catalogues or bibliographies in specialised areas of their interest. Some such efforts include the Catalogue of Sanskrit and Bengali publications printed in Bengal (by J. Robinson and J. Wenger . 1865) ; Catalogue of Manipuri Books 1891-1969 (by Manipuri Sahitya Parishad : 1970), Catalogue of native publications in the Bombay Presidency . . . up to 31st December, 1864 (by Alexander Grant : 1867). Some have a specific subject interest—for instance, Norman Barriar's *Sikhs and Their Literature, from 1849 to 1919*, Sibdas Chaudhry's *Select Bibliography on the North East Frontier of India*, Bani Basu's *Bibliography on Children's Literature in Bengali*, etc., etc.

Proscribed Literature :

The National Library also has a good amount of banned, controversial literature, along with the lists of such material issued from time to time, and lists of large number of publications exempted from registration under the 1867 Act.

This paper is, in no way, a commentary on or bibliographical survey of all source material that can be used for building up a retrospective national bibliography of India. It presents merely a sampling of the wealth of source material largely available in the National Library and seeks to stress that, given the proper resources, the National Library is ideally equipped to take up the responsibility of bridging the gaps in the bibliographical coverage.

THE INDIAN NATIONAL BIBLIOGRAPHY : A STATE OF ART REPORT

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Introduction :

More than a quarter of a century has passed since the establishment of the Central Reference Library which produces the Indian National Bibliography, a significant post-independent bibliographical venture of the Union Government. The original objective in setting up of this organisation was never formally defined though it seemed to be the desire of the Government at that time to shift this organisation, after its initial years of consolidation in Calcutta to Delhi with greater responsibilities. Due to cussedness of circumstances, this has never been realised. This organisation continues to function without the natural advantage of growth, vouchsafed for such an organisation in its location at the nation's capital.

The only function of this is the issuance of the current national Bibliography, though, of late, it has launched, on an experimental basis, 'Index Indiana', a documentation service in select Indian languages. A reassessment of this organisation, at this stage, is called for so as to evolve the future plans in consonance with the functional character of this.

It is well-known that the Indian National Bibliography seeks to map out in a scientific manner the reading materials published in the country, on the basis of the legal deposit Act known as 'Delivery of Books Act'.

The reliance of the Central Reference Library on the National Library for the receipt of books for recording purposes is a nexus which many non-professionals in the country are not aware of. So the strength and weakness of the coverage of I. N. B. is, in a way, a reflection of the National Library's operation of the D. B. Act. If fairly comprehensive coverage of Indian publications is the responsibility of the Central Reference Library, equal share of responsibility is also that of National Library.

As any state of art report should contain a historical background against which the existing situation has to be viewed and suggestions for improvement made, we recapitulate briefly the history of this Bibliography.

PART I

Historical Background :

In 1955 a committee appointed by the Union Government under the chairmanship of Shri B. S. Kesavan, the then Librarian, National Library,

went into the question of framework of the I.N.B. and laid down the general structure and the principles (which should govern the compilation details such as the coverage, the script, classification, cataloguing, periodicity) were looked into and decided in favour of I. N. B. listing the publications of the country consisting of 14 recognised languages and English. Use of romanisation was decided to this multi-lingual bibliography due to the practical reasons of difficulty of printing at one place in all the scripts of the languages.

The example of the British National Bibliography which had just then made a mark in the bibliographical world, was before the committee to emulate. Soon after, the nucleus staff, recruited for the purpose, produced pilot fascicules, one using Dewey Decimal classification and one using Colon and these were distributed for professional comments. While romanisation of entries in one filiatory order was commended by many, including scholars like Dr S. K. Chatterjee and Prof. Nilkantha Sastri, Dr Ranganathan was emphatic in pronouncing his opposition to this arrangement and would prefer separate language fascicules, on the basis of their utility and economy of production.

It was due to the initiative, dynamism and active involvement of Shri B. S. Kesavan the bibliography made its first appearance as a pilot issue in 1958 (appearing as the quarterly issue covering Oct.-Dec., 1957). Since then, until 1963, it was published annually with quarterly basic issues. During the succeeding four years, the periodicity of the basic issues was changed to monthly. The tempo of the publication was satisfactory till 1967 when the monthlies had to be suspended due to the prevailing confusion in the National Library, which gave no time to the then general editor of this bibliography to look after.

For the gap of three years (1968-70), we have neither annual volumes nor monthlies, though the records containing entries are kept in the library. Here it should be mentioned that till 1970 the national librarian held charge of the Central Reference Library also. In that year, the Central Reference Library came under an independent librarian and this generated a spurt of activity. Monthly issues were resumed and private press was engaged in printing the bibliography and during 1971-77 the annual volumes and monthly issues have been published for those years, though with yawning intervals. When the printing schedule was picking up, the emergency situation in the country made an impact on the printing also. On the instructions of the Government, the printing work had to be given to the Governmental Presses. Once again, it slackened the printing schedule and monthlies had to be suspended because of the unreasonable delay in printing (for example few monthly issues of 1977 were in the Govt. of

India Press, Coimbatore for over the two years). So the main hurdle all these years was the hopeless dependance on the Govt. of India Presses (Nasik, Calcutta and Coimbatore). Another snag is the inordinate delay in getting the price fixed for printed volumes which had to be done with the concurrence of the ministry.

So the problem that confronted the library through the years was to find out a media of printing that could be dependable and within our control. The erratic appearance of I.N.B. as annuals robbed it of its merit as a current national bibliography. The stalemate of the bibliography continued till recently when photo type setting equipment was installed under the direct control of the library. Much on it will be dealt with in the second part of the paper.

It should be noted here that since 1958 there has been no major change in the general format of I. N. B. One change done in 1963 was to do away with the bipartite nature of the bibliography. In other words, the separateness of government publications from the general publications was found artificial and done away with. The second change was affected very recently by pruning author index entries to contain only essential information (1979). This was motivated by the desire to quicken the printing.

PART II

Current Position :

The year 1984 had been a year of resuscitation of I. N. B. as in that year the monthly issue has been resumed after a lapse of six years, thanks to the introduction of a photo type-setting equipment. The delay in printing the bibliography affected very much the sale of publication. As a current bibliography, it became virtually non-existent. So in desperate search for a suitable printing media, we succeeded in getting to know about Alpha photo type-setting equipment (Alphacomp), marketed in India by the Monotype Corporation of India. This imported equipment from United States was installed in December, 1983.

The equipment consists of three Units—operation, memory and printer. The advantages of this equipment are that setting can be done by an operator who is able to see the characters set on a visual screen and can easily make necessary corrections. Appropriate diacritical marks, hitherto a source of great delay, can be placed above or below the character whenever required. (But at present, diacritical marks, which are not available on the key board of the equipment are manually given on the

finished paper). The resulting image, produced directly on a paper (p. 90 Bromide paper) is much superior to that obtained by a conventional hot metal letterpress printing. The Operator can produce the master-copies of sheets of a 100 feet in a matter of 25 days (one monthly issue). Copies are made up with columns and pages and by offset printing at private press, the copies are produced. Taking into account the crucial role of one Operator doing all the composing work which the Govt. of India/Private Presses were doing at considerable cost and delay, it is necessary to have more equipment with similar number of Operators. Efforts are being made to include purchase of additional equipments in the 1985-86 years' budget. Eight monthly issues of 1984 have been published so far, bringing time-lag to 3 months. With additional equipments, it is hoped to narrow down to the minimum period.

Coverage .

It is estimated that India produces about 20,000 titles a year, occupying thus the third place in publishing in English Books in the world and eighth in book publishing in the world. So the coverage by I. N. B. may be 50 to 60% books published in the country. A cursory analysis of the statistics of titles listed in the I. N. B. (1958-1982) reveals that English continues to dominate, accounting for 21.7% of the total Indian publications. Perhaps, the figure may be more if a very comprehensive coverage had been made. As is expected, Hindi dominates numerically the Indian languages, though one would have expected more titles because of official patronage and the large area where it is spoken. Bengali and Marathi languages are by and large well represented and numerically exceed other Indian languages (barring Hindi). Religious works have been produced more in Indian languages than in English. Nearly 10% of books produced in the country were on History, Geography and Biography.

For the present, the I. N. B. excludes certain categories of publications. Some opinions are expressed that I. N. B. should include all the publications that are published in the country immaterial of the fact where they have literary warrant or not. Some others feel that I. N. B. should include books published elsewhere in the world written by Indian authors and books written on India published elsewhere. As mentioned earlier, proper monitoring by the National Library can bring out a comprehensive coverage in I. N. B. In his report, J. C. Downing, former Deputy Editor, British National Bibliography submitted to the ministry a report after a visit to I. N. B. at the invitation of the Govt. of India in November 1982, pointed out the necessity of close co-operation with the National Library for effective coverage. His visit was sponsored by the British Council. He pinpointed the following, *inter alia*, in his report (i) Administrative diffi-

culties in getting vacancies filled, (ii) Lack of accommodation (iii) Lack of staff manual (iv) Need to group the entries according to languages (v) Printing media in favour of Photo typesetting (vi) Lack of opportunities for the staff (vii) Need to advertise I. N. B. and (viii) Need to find better monitoring methods to track publications by National Library. Further he was emphatic in suggesting timeliness of publication even at the cost of accuracy of technical details.

Before passing on to the technical aspects of the bibliographies, it is relevant to mention the delay in publishers' depositing books and the consequent delay in reporting in I. N. B. It is conceded that delay is also due to the non-availability of language personnel in the Central Reference Library. There has always been vacant positions in languages. In the survey of Indian Book Industry by the National Council of Applied Economic Research (1976) a suggestion was made that the National Library should pay the postage for books it receives under the act. As more than Rs. 3 lakhs worth of books are received in the National Library free from the publisher, it should be possible to spend some amount on the postage to enable greater and quicker receipt of books.

On Technical Aspects of Compilation :

The technical recommendations of the I. N. B. Committee (1955) have lost their relevance today. To keep in tune with the latest changes, it is necessary to change to 19th edition and hope a decision will be taken soon. The adoption of 19th edition of the Dewey is necessary to keep in tune with the international bibliographical practices which will ensure mutual exchange of information. The format of the entry could not be redesigned on account of our apprehension that it could affect our printing schedule: Caution has to be exercised to adopt it least it should affect printing schedule. When the bibliography becomes regular in appearance with minimum delay, it will be appropriate to adopt these. Our annotations, it is said, are not adequate. The subject index, at present based on chain procedure method is not satisfactory for retrieval of documents with very specific aspects of a subject.

Language Bibliographies :

Soon after the Roman Script bibliography made its appearance, it was felt necessary to bring out with the assistance of State Governments the language bibliographies, to make the bibliography easily accessible to common reader, libraries, institutions, etc. On the basis of manuscripts prepared by the C.R.L., the bibliographies in different languages began to appear. This is a sequel to Chief Secretaries Conference in 1959 when

the Ministry of Scientific Research & Cultural Affairs raised this issue and got their ratification. It has not been a success except in the case of Malayalam, and to some extent in the case of Hindi Bibliography. Many other languages are highly irregular as the State Governments have not been uniform in giving patronage. In some States like Tamil Nadu, the Connemara Public Library brings out its own Tamil bibliography, based on the receipt of books by D. B. Act. This has naturally, prejudiced the State Government and the result is discontinuance of annual volumes in Tamil language. The irregular appearance has led us to take upon ourselves, the printing of language bibliographies and a beginning has been made by bring out Assamese, Bengali and Oriya bibliographies (annual volumes covering the latest year, 1984). Other languages will also be taken up in due course in phases.

Administrative Difficulties :

In a sense a current National Bibliography is like a successful periodical which makes its appearance at regular intervals. This is possible with full complement of staff. The necessity to conform to the rules of recruitment rigidly makes it difficult to fill up the vacancies within a short time after the fall of vacancies. Some relaxation of rules may be necessary, in view of the special nature of the project. Further lack of opportunities within a small organisation such as this, has resulted in persons going out for better jobs. The language competent personnel is difficult to get, as the salary offered for them is not attractive. Deployment of staff in vacant positions is not always possible for want of language competence. In spite of these, the services of the experienced national Bibliographers (Assistant Editors & Sub-Editors) can be very well seen in the number of issues (200 in number) published by this library.

A Foreign Exchange Earner :

Publicity of the bibliography has to be mounted up as the number of subscribers is too small for a very big country like India. As a foreign exchange earner, it can steadily built up more foreign subscribers on its becoming regular. It may be stated here that this library has earned a foreign exchange of Rs. 15 lakhs during the period 1958-1984.

The Use of Computers :

The annual cumulations, a necessary tool for retrospective search, are produced with great efforts, in the absence of modern methods of production based on computers. But genuine efforts are being made to see how this is possible.

Future Set-up and the Role of Review and Ad-hoc Committees :

The future of I. N. B. has very much to do with the organisation pattern that will be evolved by the Review Committee for reorganisation of the Central Reference Library which has been set up recently.* The question of nomenclature of C. R. L., its linkage with the National Library, introduction of further hierarchy in the cadres to give job opportunities, its future expansion plans are some of the issues which will have a great bearing on the future of this small but significant organisation. But, at the same time, technical innovations for greater and effective use of the bibliography can be brought about in the next five years. For this it is suggested the appointment of an *ad-hoc* committee consisting of representatives from the library profession, publishers, booksellers, scholars and authors to go into such issue as the role of the National Library *versus* National Bibliographic Agency, the scope, the type of materials to be covered, the definition of a national imprint, relationship between Copyright and Delivery of Books Act, use of internationally agreed elements to be used and arrangement of data, the problems of using language scripts as against the romanization of scripts, etc. Well considered recommendations can form the basis for future innovations of the National Bibliography. Last but not least, is the question of documentation of Indian language periodical literature. This can also be determined to set rest the present anomalous position of this project (Index Indiana).

*Since writing this, the Review Committee for reorganisation of the Central Reference Library met twice and is likely to come up with far reaching recommendations in the near future.

INDIAN NATIONAL BIBLIOGRAPHY : PALLIATIVES WON'T DO

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The Government of India invited in 1982 Joel C. Downing, a retired member of the staff of British National Bibliography, to advise on the re-organisation of the Indian National Bibliography (INB) which had been in an inanimated state since 1977. The INB restarted its publication with the January 1984 issue, *presumably* after taking Downing's observations and suggestions into consideration. We discuss hereunder some of his important observations, as also the present situation of the resumed publication.

DOWNING'S OBSERVATIONS, THESE RELATE TO :

1. *Regularity and Currency.*

While regretting the decision to suspend INB in 1977, Downing observes that the impetus created by a regular publication at frequent intervals injects a sense of urgency and deliberate achievement which is impossible to maintain by a cycle of annual publications. While the annual volumes possess a reference value, it is the regularity and currency of the interim issues which determines the value of a national bibliography of the size of INB.

2. *Romanisation :*

It is lamentable that even now there is no one press in India which can compose the text of INB, comprising of 14 languages recognised by the Constitution. While complimenting the founders of the Bibliography for finding a solution of the problem in romanizing the entries, Downing points out the difficulties created thereby. Little of this roman text, replete with diacritical marks can be comprehended readily by the keyboarders employed in setting the text of INB, entailing a very slow rate of setting and an equally painstaking correction process on the part of editorial staff.

3. *Comprehensiveness :*

An important observation made by the author of the report, relating to the reason for lack of comprehensiveness of the Bibliography reads :

Continued delay in the appearance of INB itself does little to encourage vigorous action on the part of the staff of National Library in pursuit of missing publications.

4. ISBNs :

Echoing the concern of the book trade in India about its forced deprivation of ISBNs in the absence of a coordinating agency in the country, Downing would like the National Library/Central Reference Library to take up this task so that the largest output of English books, outside the US and Great Britain, get benefit from the possibility of automated processing in bookshops and publishing houses.

5. Cataloguing and Classification :

Expressing himself against any major changes within the publication itself, the report advocates adoption of more recent practices in cataloguing (AACR 2) and classification (DDC, 19th edition) to bring INB in line with other major national bibliographies. Consideration should also be given, says the report, to the use of ALA romanisation tables so that at an appropriate point in future the exchange of machine readable records would be possible.

Comments :

It may be said about the Downing Report that while it diagnoses the disease alright, it suggests a prescription which can only prolong a paralysed life, not cure it. This is proved by the sloven pace of the bibliography after resumption of its publication in January 1984. What follows below is a comparative study of the INB and the ALSA (Accessions List : South Asia), a monthly publication issued by the Library of Congress Office, New Delhi. It may be pointed out here that while the INB records the books received by the National Library free of charge under the Delivery of Books Act, 1954 amended in 1956, ALSA enters the material purchased after due selection and scanning.

(The undermentioned comparison is made on the basis of receipt of the two publications in JNU Library).

Currency :

While all the issues of ALSA, 1984 had been received by December-end, only five issues of INB, January through May, were received by the

year-end. The following table shows the receipt position of the two publications :

TABLE 1

Date of Receipt of INB and ALSA In JNU Library

1984	Date of receipt	
Monthly issue	INB	ALSA
January	27.3.84	2.3.84
February	29.6.84	14.4.84
March	24.7.84	15.5.84
April	29.8.84	10.6.84
May	27.10.84	13.7.84
June-December	Not received till Dec. 31 '84	All issues including Nov./ Dec. issue received by Dec. '84

Thus, while there is a gap ranging from 3-7 months between the date of publication and the date of receipt of INB, the comparative gap in case of ALSA is usually 2 months which is eventually eliminated by the end of the year.

Comprehensiveness :

As per the *UNESCO Statistical Bulletin* 1983, the annual average number of books published during the years 1979 to 1981 was about 12,000. Assuming that the book production during 1984 rose to 15,000, the monthly average figure for the year comes to 1250. Against this, the average number of entries included in the INB during January-May '84 was 770 (64%), while the comparative figure for ALSA stood at 875 (73%).

TABLE 2

Number of entries in INB and ALSA

1984	No. of entries (Figures rounded to 10s)	
Monthly issue	INB	ALSA
January	740	920
February	750	880
March	770	870
April	760	890
May	830	810
	Total—3,850	4,370

The Downing Report doesn't suggest any effective administrative measures to make the publishers of the remaining 36% books behave.

Few costly books :

Another interesting feature of the comparison between the two bibliographies relates to the price of books included therein. While there are about 400 books (out of 3850) priced Rs. 50/- and above in the 5 issues of INB, the figure for ALSA is almost the double of it. From this one may conclude that the private publishers are sending few costly books to the National Library. A large chunk of books received by the library consists of low-priced books, or official publications.

SUGGESTIONS

The above study, perfunctory though it is, brings out the point rather poignantly that nothing short of an anatomical surgery of the INB can bestow upon it the status and the semblance of a national bibliography. What does this operation entail ?

1. More than one national bibliography :

The National Library, Calcutta is today one of the several national libraries in the country, e.g., National Science Library, National Medical Library, National Agricultural Library, etc. Ere long, other libraries may be designated national libraries in other fields like Fine Arts, Languages and Social Sciences. It should be the responsibility of each National Library in the country to produce a national bibliography in its assigned field.

2. Change in the Delivery of Books Act, 1954 amended in 1956 :

To enable such libraries to procure more and more books, the Delivery of Books Act may be so amended that the national libraries get one copy of each publication produced in their respective field in the country. This provision should be welcome to the publishers as well in that their obligation to send the mandatory copies of each of their publication will be reduced to a single copy only.

In view of the very rich collection of the National Library, Calcutta in the field of Literature, this library may be rechristened as the National Library of Literature. Besides, it may also continue to act as the apex body for laying down national guidelines, and for maintaining liaison with its counter-parts in other countries.

These suggestions, if carried out, will also enable the Central Reference Library, to be shifted eventually to Delhi, to engage itself in its primary task, namely to act as the REFERENCE LIBRARY to the nation.

Acknowledgement : My thanks to Mrs. Pushpa Arora for her assistance in preparation of this essay.

REFERENCE

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GAPS IN COVERAGE OF INDIAN NATIONAL BIBLIOGRAPHY VIS-A-VIS THE PUBLISHED MATERIAL IN TAMIL

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Objectives :

This paper is an endeavour to map out the lacunae in the coverage of Tamil books in the Indian National Bibliography (INB). The INB as well known, is a record of books received in the National Library under the Delivery of Books Act of 1954. And as such my attempt is mainly to size up what percentage of the annual output in the language reach the National Library under the law.

Current Publishing Scene in Tamil Nadu :

To begin with a brief description of the current publishing scene in Tamil Nadu is very essential. Although we have the names of over 600 publishers who are also book sellers on our files, the output of a vast majority of them is limited to one title a year or a title in the course of two years. The bulk of the significant output emanates from the cities of Madras, Madurai, Coimbatore and Tanjore. On an average 1500 titles are produced annually. The estimate is a very rough one as no complete and dependable statistics have been framed by any responsible agency in the world of books.

The National Library is getting a major percentage of the publications and it is listed in the I. N. B. But what is the percentage of inclusion or coverage? And how many titles, escape the notice of National Library and the pages of the INB?

Answers to these questions can be found only by a survey of the annual output and comparing it with the printed records of the INB or the receipts in the National Library. The tools for such a survey, which apparently looks simple but is beset with real problems are :

1. Advertisements of the literaryware.
2. Catalogues of the publishers.
3. Reviews in periodicals.
4. List of books received in the Connemara Public Library (CPL), the southern beneficiary of the law of legal deposit and the Tamil-nattu Nurrokai or the Tamil Nadu State bibliography.

Tamil books are not advertised as widely or regularly as in Marathi, Telugu, Malayalam and Bengali. Hardly twenty per cent of the new books, get into the review columns of 'Dinamani', 'Kumudam', 'Kalaimagal' and other weeklies. One like 'Desh' in Bengali or 'Mathru Bhumi' in Malayalam with a large number of regular advertisements of current output does not exist in Tamil.

Seasonal or annual catalogues are very rare in the language with only publishers like Vanati or Manimekhalai issuing an annual list of their titles. There is no such tool comparable to the N.B.S. Bulletin and the Annual Catalogue, the house journals of the Writers' Co-operative Society in Kerala which makes an effort to list over 80% of the books in print and provide useful documentation on Malayalam books, their writers, their sales and other literary titbits. Unfortunately, a Librarian or a bibliographer draws a blank in this sphere in Tamil *

Review Journals :

As mentioned earlier, the mass circulated weeklies and monthlies of Tamil unlike Bengali or Malayalam cover only twenty-five per cent of the new titles. These reviews are neither information oriented nor with any literary merit. Although we use these columns for tracing books, not such useful information can be computed from them for the purpose of a survey. In short the conventional sources of information which can be depended upon in Marathi, Bengali or Malayalam for a survey do not exist in Tamil. And this leaves us with the choice of only one source—the receipts in Connemara Public Library under D. B. Act and their state bibliography.

Indian National Bibliography :

Before I proceed further, here I pause for a while over the difficulties when one examines the volumes of INB. The INB as we all know has been falling face down at repeated intervals and has been limping after the mid sixties. The latest annual volume relates to 1977 and the monthly volumes of Tamil fascicules have also long been suspended. There are no up-to-date cumulations except in Malayalam language.* In short no volumes on recent years are available. Again the INB does not include all the titles that we pass on to them in the same calendar year. Till July 1984 our receipts are 848 while only 694 have been included in INB for the same period. It may also be mentioned here that although the NL received 1459 titles in 1984 the INB has drawn only 1160 titles till Decem-

*The International Institute of Tamil studies has embarked in recent years on an ambitious programme of bringing out annual bibliographical surveys. Three sumptuous volumes for 1980, 1981 and 1982 have been published so far.

ber 31, 1984. The remaining titles as well as those received during the current month are on our racks. I have highlighted this aspect only to state how hazardous a survey is under these circumstances.

Comparative Picture of C. P. L. and N. L. :

In the light of what has been stated so-far, I venture to draw a comparative study of the receipts in Connemara which are listed in the Tamilnattu nurrokai or the state bibliography with the receipts in National Library which form the base of INB.

There are about 30 major publishers who account for about 60% of the annual output. We can safely say that NL has been getting fairly fully the titles emanating from these thirty units, of course after an effort involving constant notices and requests. A perusal of the Connemara lists, which we regularly scrutinise reveals that we in Calcutta do not receive the occasional title published by small units or individuals in small towns. It has been a difficult task to watch and rope in the individual publishing output. In short the N. L. has been getting the cream of the significant.

Now we can have a peep into the quantitative data of the five years between 1979 and 1983.

TABLE

<i>Year</i>	<i>Connemara or Public Library</i>	<i>National Library</i>
1979	1562	1302
1980	1121	1172
1981	1252	1138
1982	1092	1385
1983	876	804
	5905	5801

The table shows that although there is a little variation in the annual receipts, the total for the five years is nearly the same. Connemara Public Library has recorded a little over 100 titles more than the N. L. which may be assigned to their physical proximity to the publishers.

As I mentioned earlier, there are no reliable statistics of the annual output. But it is generally presumed that about 1500 titles are published every year. With the recent sanctioning of Rupee two crores for book purchase by the Madras Government, the output which dwindled in 1983,

a lean year, is expected to increase further. In 1984 we have received 1469 titles, which compares well with the receipts of the previous years (See table at page no. 34). On an average we receive 1100 to 1200 out of the total of 1500. In other words we get about 80% of the Tamil literary output, leaving a gap of 20%. This may safely be treated as the lacunae in the Indian National Bibliography.

Suggestions :

In conclusion I may venture to suggest a few steps to stabilise the receipts and also to increase them.

1. The language divisions should be properly staffed.
2. Reminders and acknowledgements should be prompt and regular. And if possible the language of communication should be in the local language, although we have chosen the Roman script for the N. L. Catalogues and the I. N. B.
3. The clauses relating to the Delivery of Books Act should be published in the regional language journals and periodicals atleast once a year.
4. A constant liaison with the area should be maintained by deputing the officers of the N. L. to the respective regions.
5. The INB should be more regular and books of the month should be listed *in toto* in the succeeding month, which unfortunately is not the practice now.

Conclusion :

The above suggestions add upto only a cosmetic surgery. What we really require is a new look at the Act and the National Bibliography. The storing and preservation of the national output will be effective only in a decentralised structure. The problems of space, staff and script and allied problems thrown out by the centralisation in Calcutta warrant a review of the entire issue. It is time we think of a net work of national libraries.

GAPS AND COVERAGE OF HINDI LANGUAGE MATERIALS IN THE NATIONAL LIBRARY, CALCUTTA

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Introduction :

I

The National Library, Calcutta is at the apex of libraries in India as far as the nature of work and the collection is concerned. It is an index of published materials which show the intellectual and cultural advancement of India. It is supposed to acquire and preserve all materials published in India besides acquiring important publications of the world irrespective of their languages. The Hindi Division is one of the unit among the various functional divisions of the National Library. Hindi collection of the National Library is nearly a quarter to a lakh including Government publications and bound volumes of important journals and magazines. Today the position of Hindi is getting to be an International Language.

Hindi is the national as well as official language of India and also the state language of Bihar, Madhya Pradesh, Uttar Pradesh, Rajasthan, Delhi, Haryana and Himachal Pradesh. The States of Gujarat and Maharashtra though classified into semi Hindi regions have great dealings in Hindi due to their commercial orientation. More than 80% of the Hindi books are published from these parts of India.

Prominent Hindi Agencies and Organisations :

In non Hindi States some Government and private agencies and organisations are engaged in the publication of Hindi books. Their endeavour in this regard is remarkable and praiseworthy. It will not be out of place to mention the names of some of these agencies and organisations. Prominent among them are :

- (1) Bangiya Hindi Sahitya Parishad, Calcutta.
- (2) Dakshina Bharat Hindi Prachar Sabha, Madras-3.
- (3) Dakshina Bharat Hindi Prachar Sabha, Cochin, Kerala.
- (4) Gujarat Prantiya Rashtira Bhasha Prachar Samiti, Ahmedabad.
- (5) Hyderabad Hindi Prachar Sabha.
- (6) Jammu and Kashmir Cultural Academy, Jammu.
- (7) Maharashtra Rashtrabhasha Sabha, Pune.
- (8) Pashchimang Rashtrabhasha Prachar Samiti, Calcutta.

- (9) Rashtrabhasha Prachar Samiti, Wardha.
- (10) Rashtrabhasha Prachar Samiti, Gauhati.
- (11) Rashtrabhasha Prachar Samiti, Hubli, Karnataka.
- (12) Rashtrabhasha Prachar Samiti, Manipur, Imphal.
- (13) Aurobindo Society, Pondicherry.

Statistical Data of the Receipt of Hindi Publications :

As such, the receipt of the Hindi books under the D. B. Act in the National Library is next to the English Language. Government publications also form a bulk of the Hindi receipts. The Governments of Bihar, Madhya Pradesh, Uttar Pradesh, Rajasthan, Delhi, Haryana and Himachal Pradesh are bringing out their publications mainly in Hindi. To give an idea of the cross section of the receipts of Hindi publications the statistical figure of the receipt, during the last five years is given below :

Hindi books received under D. B. Act from the year 1979-80 to 1983-84

		Total
1979-80	General—1335 Govt. Pub. 856	2191
1980-81	General—1914 Govt. Pub. 311	2225
1981-82	General—1486 Govt. Pub. 1070	2556
1982-83	General—1919 Govt. Pub. 962	2881
1983-84	General—1568 Govt. Pub. 763	2331

The Statewise break up of the above receipt will be as follows :

Books received under D. B. Act in the Hindi Division from the year 1979-80 to 1983-84

	1979-80	1980-81	1981-82	1982-83	1983-84
Andhra Pradesh		1	7	3	1
Bihar	183	197	263	281	173
Delhi	1301	1294	1353	1498	1090
Goa	—	—	—	—	—
Gujarat	15	—	13	7	14
Haryana	76	36	152	141	47

Books received under D. B. Act in the Hindi Divisions—Contd.

	1979-80	1980-81	1981-82	1982-83	1983-84
Himachal Pradesh	9	19	36	23	42
Jammu and Kashmir	—	—	—	—	2
Karnataka	—	—	—	—	—
Kerala	—	3	4	2	2
Madhya Pradesh	24	41	81	118	156
Maharashtra	10	19	—	13	80
Orissa	3	—	—	—	—
Pondichery	13	24	36	41	7
Punjab	18	21	24	19	60
Rajasthan	83	133	115	152	161
Tamil Nadu	3	—	—	—	1
Uttar Pradesh	437	398	438	560	468
West Bengal	19	39	34	23	27
	2191	2225	2556	2881	2331

From the various data and published statistics, it is observed that the receipts of Hindi books under the D B Act in the National Library vis-a-vis the total out-put is comparatively much low. For the purpose of the implementation of the provisions of the Act more attention requires to be paid for the acquisition of the books under the Act or an alternative measure may be sought to fill up the gaps.

We have to remain more attentive to find out the latest Hindi publications locating them from various catalogues, book-reviews, etc. and follow up work requires to be taken up to augment the receipt. More publicity should be given to acquaint the public and publishing agencies about the Act.

Books published after the enactment of the D. B. Act, found their place in the Indian National Bibliography with effect from the year 1958. However, to locate the books published prior to the year 1954, consultation of the various book catalogues, printed bibliographies, brought out by various agencies and individuals is necessary.

Selected Bibliographies :

Mention may be made of the following selected important bibliographies available in the Hindi language.

- (1) Aryabhasha pustakalaya ka suchipatra, Varanasi, N. P. Sabha, 1944.
- (2) Bihar, Ministry of Education, Hindi Granth Suchi, Patna, Supdt. of Libraries (Sinha Library Bhawan), 1952.

- (3) Blumhardt, J. F. ed.
Catalogue of the Library of the India Office (Hindustani books),
London, Eyre and Sprottis-Woode, 1900 V II, pt. II.
- (4) British Museum, *London*
A supplementary catalogue of Hindi books in the Library of
the British Museum, acquired during the year 1893-1912 ed.
by J. F. Blumhardt, VII.
- (5) British Museum, *London*
A second supplementary catalogue of printed books in Hindi,
Bihari and Pahari... ed. by L. D. Barnett, etc., London,
British Museum, 1957.
- (6) British Museum, *London*
Catalogue of the Hindi, Punjabi, Sindhi and Pushtu printed
books in the library of the B. M., ed. by J. S. Blumhardt,
London, 1893.
- (7) Gupta Mataprasad
Hindi pustak sahitya, Allahabad, Hindustani Academy, 1945.
- (8) Krishnacharya.
Hindi ke admudrit granth, Calcutta, Bharitiya Jnanpith, 1966.
- (9) Pitambhar Narain, ed.
Hindi sahitya sarini, Hoshiarpur Vishveshvaranand Sansthan,
1971 2 vols.
- (10) Varanasi Nagari Pracharini Sabha.
Hindi mein uchchatar Sahitya ; comp. by Mangal Nath Singh ;
ed. by Rajabali Pandey, 1957.

It seems that the policy of the Imperial Library regarding the acquisition and preservation of Hindi publications was not favourable. The Imperial Library did not have even the important publications of Hindi collection published in the later part of the 19th century and the first half of the 20th century although Calcutta was the seat and anchor place of Hindi at that time.

Present Position and Problems :

Even after the independence and the enactment of the National Library Act (the change of name from Imperial Library to the National Library) the acquisition of Hindi publication was not met favourably. After the enactment of the D. B. Act a slow but steady process was adopted in the acquisition of Hindi publications. However in 1960 as records reveal all out attempt was made to cover the gaps by acquiring Hindi publications available in the market. But it was too late. In spite of the best possible

endeavour the National Library could not procure all the Hindi publications as most of them were not available in the local market.

In the 1970's the acquisition of Hindi publication was limited to D. B. Act receipts. The statistics of D. B. Act acquisition reveals that the National Library is not getting satisfactory publications. Scholars and research scholars from all over India are coming to the National Library, Calcutta, in connection with their research work. They are of the opinion that every thing published in India and abroad in Hindi should be available in the National Library. But unfortunately we fail to cater to their need due to various reasons. Our responsibilities increase more when the National Library, Calcutta has been declared as a repository Library and Hindi as national and official language of India. At present our main source of receipt of materials is through D. B. Act only.

As regards the old and rare publications there is no alternative but to receive them either through gift or microfilms. We should keep our door open to receive such personal collection. The National Library is the suitable place to preserve such rare collections and utilize them to cater to the needs of readers and research scholars. But the facility of microfilming is not available everywhere and to borrow the materials and get them microfilmed is a costly and time consuming process. Besides this we cannot borrow everything. Thus the only way left to receive them is through gift.

It is a matter of regret to say that even many government sponsored and supported organisations seem quite indifferent to send their publications to the National Library under the D. B. Act inspite of continuous reminders. Some provincial Grantha Akademies and institutions specially come under it. The publications of such organisations are of higher standard. The receipt of such publications is a must for the National Library.

Suggestions :

The gaps and coverage of Hindi materials can further be met by consulting the catalogues and publisher's list of leading book sellers and publishers of Hindi publications. To cover the gaps it is desirable that provisions of lumpsum amount be exclusively made available to purchase Hindi books.

At the end it will not be out of place to mention here that unless our publishers consider it as their moral duty to deposit their publications with the National institutions without any reservation, it will not be possible for us to collect and preserve printed material in Hindi. Since Hindi is the official language of the country. There is immense scope for its development. So special attention is required to cover the gaps in the Hindi language collection in the National Library.

BIBLIOGRAPHIC CONTROL OF BENGALI PUBLICATIONS IN THE NATIONAL LIBRARY, CALCUTTA

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Bibliographical Sources :

In the absence of any legal deposit system and because of dependence on very limited funds for purchase of books, the growth of the collection of books in the Bengali language in the National Library, Calcutta upto 1954 was very slow and stunted. The collection was neither a quantitative representation of the total output of Bengali publications of the century, nor did the Library prepare any bibliography of Bengali books. Therefore to get information about the output of Bengali publications from about 1800 (when the printing of Bengali books first started) upto 1954, one has to consult the following sources :

(1) Long. Rev. J.

Descriptive catalogue of Bengali works, containing a classified list of fourteen hundred Bengali books and pamphlets which have issued from the Press during the last sixty years with occasional notices of the subjects, price and where printed, Calcutta, 1855.

(2) Wenger, J.

A catalogue of Sanskrit and Bengali publications printed in Bengali, Calcutta, 1867.

(3) British Museum, London

Catalogue of Bengali printed books in the Library of the British Museum, 1886, Supplements, 1910 and 1939.

(4) India Office, London

Catalogue of the Library of India Office, Vol. II, part IV : Bengali, Oriya and Assamese books, 1905 to 1920, 1923.

(5) Quarterly Catalogue of Books registered in the Presidency of Bengal, 1868—. This publication is popularly known as "Bengal Library Catalogue". This is a bibliographic record of publications printed in Bengal and received by the Registrar of Publications, Govt. of Bengal, under the Press and Registration Act of 1867.

(6) The printed Catalogue of the Bangiya Sahitya Parishad,

(7) Sahitya Akademy, Delhi,

National Bibliography of Indian literature, 1901-1953. Its first volume published in 1962, contains a classified selective list of Bengali books.

India's National Library

Although the above mentioned publications may prove to be indispensable for information about Bengali books printed and published upto 1954 ; yet the importance of the Bengali collection of the National Library, Calcutta in respect of bibliographical control cannot be ignored, we should remember that the Library though designated as The National Library in 1953 and purported to be developed in post independence India on the lines of the world's great national libraries, it has a long past history beginning from 1836, the year of the establishment of the Calcutta Public Library. As is known, it was through the amalgamation of the Public Library with several Government departmental libraries that the Imperial Library was formed in 1903 and situated in Calcutta and as the biggest library of the country continued to exist under that title till 1953. Its Bengali collection may therefore be said to have grown from 1836. Although the growth is meagre, we find in it quite a number of publications of the Serampore Press and of the Fort William College, the two sources of production of early printed books in Bengali and other Indian languages. Besides those very early printed books, there are many old and rare books which may not be found even in the collections of the British Museum and the India Office Library.

Printed Catalogues

The collection that grew from 1836 to the end of 1937 that is over a hundred years, has been bibliographically described in the printed catalogue of Bengali books published in four volumes (vol. 1 : 1941, vol. 2 : 1943, vol. 3 : 1954 and vol. 4 : 1963). This catalogue covers a total of 22,000 books, and may be considered as a good supplement to bibliographical sources cited above.

The Bengali Division of the National Library has also prepared for the press a supplementary catalogue of Bengali books acquired by the Library from 1938 to 1954, covering a total of about 6,000 books when printed and published. This supplementary volume alone with the original catalogue will reflect to some extent the output of Bengali literature from the beginning of Bengali printing to the middle of this century.

Delivery of Books Act, 1954

The year 1954 marks the beginning of the golden phase of the development of the collections of the National Library in the Indian languages. This year the Delivery of Books Act was passed. This Act empowered

the National Library to become the legal depository of Indian publications. As a result, the Library's collection grew considerably. The Bengali collection also developed fast, the annual acquisition going up from 1955 onwards—For example, from 1955 to 1965 the total acquisition was about 12,000 that is an average of title more than 1000 books per year. We have seen that the total collection of Bengali books for 1837-1937 was only about 22,000 which means an annual growth of about 220 books only.

Indian National Bibliography

Following the enforcement of the Delivery of Books Act, the Govt. of India created Central Reference Library for the purpose of the preparation and publication of the *Indian National Bibliography* which would serve as the current record of the national output of literature. In this effort towards the bibliographical control of Indian publication, the task of the National Library has been to see that the Deposit Act is implemented fully, which means that all publications are duly received in the Library, for, the coverage of the I.N.B. depends on the receipts of the Library.

The provisions of the D. B. Act is such that unless a publisher himself cares to deposit each of his publications, it is very difficult to force him to deliver books to the Library. A publisher may defy the law, since the punitive measures are slight and that too, very time-consuming. Indeed the punitive measures are negligible and that too, very time-consuming. Indeed the publishers have long ceased to show the same care and enthusiasm to deposit books which they showed during the first few years after the enactment of the D. B. Act. The case is the same with the publisher of Bengali books. The National Library has now to try to keep track of the Bengali publications by regularly going through the advertisements of new publications, and to visit the publishers and persuade them to deliver the books not sent to the Library. That such efforts taken by the Bengali Division have been fruitful may be evident from the comparative figures of receipts for the five years at the office of the Registrar of Publications, Calcutta and at the National Library, Calcutta.

Comparative study of figures of Registrar of Publications and National Library :

The receipts at the office of the Registrar of Publications, Calcutta, from 1979 to 1983 are as follows :

1979—231
1980—324
1981—193
1982—230

The receipts at the National Library, Calcutta for those years are given below :

1979—1039
1980—1025
1981—1046
1982—1032
1983—1288

However, gratifying the figures for the National Library may appear to be, they do not imply satisfactory acquisitions under the D. B. Act. The gaps in the receipts for such year come to our notice from the enquiries of the readers. The reasons behind the unsatisfactory receipts under the D. B. Act is the insurmountable difficulty in getting the correct information about the annual output of Bengali publications. There is no comprehensive source for such informations. The publishers do not collectively publish any list of current publications. So it is almost impossible to keep track of all newly published Bengali books

Suggestions

To solve the problem it may be suggested that the Associations of publishers be urged to publish collectively a comprehensive list of current Bengali books periodically and regularly and also to impress upon individual publisher the advantage and utility of depositing a copy of each publication to the National Library

APPENDIX

Acquisition of Bengali books in the National Library : 1836-1954 : 28, 000, 1955-1985 (31st March) . 69,000

Details from 1964-65 to 1984-85.

1984-85.

1964-65	—	2,252	1975-76	—	2,351
1965-66	—	1,515	1976-77	—	2,360
1966-67	—	2,324	1977-78	—	1,557
1967-68	—	2,668	1978-79	—	1,039
1968-69	—	3,046	1979-80	—	1,533
1969-70	—	2,803	1980-81	—	1,289
1970-71	—	2,080	1981-82	—	2,273
1971-72	—	1,803	1982-83	—	2,000
1972-73	—	1,781	1983-84	—	2,200
1973-74	—	1,571	1984-85	—	1,318
1974-75	—	1,672.			

BIBLIOGRAPHICAL CONTROL OF MAPS AND ATLASES IN INDIA : SOME SUGGESTIONS

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Introduction :

While the monograph literature produced in the country gets ample coverage through such bibliographical works like Indian National Bibliography, maps and atlases produced in the country have not been adequately covered. Such a control is a very desirable one, because much time has already in leaving such material unrecorded.

Indian Scene :

Maps and atlases : Old maps and atlases are scattered in various libraries, archives, societies and research organisations. There are about one hundred fifty such places in India where valuable maps (manuscript & printed) are to be found. The physical condition of such collections, is not exactly known. Sarasvati Mahal Library of Thanjavur and Bharatiya Itihasa Samashodhaka Mandala of Pune are two examples where one can come across valuable cartographic records. Old (printed) maps are available in the Madras Record Office, Madras, Salar Jung Museum, Hyderabad, etc. The National Library, Calcutta, has also a good collection of manuscript and printed maps of research value. There are a few more places where such category of publications may lie without proper publicity.

Maps published in India during the post independence period have been remarkably good. Apart from the Survey of India, Geological Survey of India, National Atlas and Thematic Mapping Organisation, Registrar General, India Office and some such organisations have made good progress in publishing maps and atlases. The general map and atlas collection of the Geological Survey of India, Calcutta is varied and rich. Next in this category comes the collection of National Atlas & Thematic Mapping Organisation, Calcutta, where there is a maximum number of National Atlases of various countries and also the aerial photographs. The Indian Statistical Institute, Calcutta has a very good collection of village maps, as well as other maps and atlases. Sadly enough no list of catalogues are available from these organisations. In other parts of India the picture is almost the same.

Catalogues :

Latest and most valuable work has been done by the National Archives of India, New Delhi. This institution has published a catalogue of the "Historical Maps of the Survey of India (1700-1900)" in 1975, listing 8,000 maps. The entries have been done in a systematic manner. This is, of course, a good attempt in at least giving some information about the manuscript and printed maps available. There are some more maps in this National Institution which have not been listed. In the recent past, there have been some attempts in listing and publishing the material available in various collections. The Director of PEPSU Archives published in 1955, a list of old maps available in the above archives. In 1918, the Victoria and Albert Museum, Bombay, published a catalogue of maps, prints and photographs of the Isle of Bombay and the Bombay City. The Madras Record Office, Madras, published in 1914, a list of Maps and Plans of general maps and nautical charts. The Madras Survey Department, Madras, published a catalogue of presidency maps in 1938, district maps, taluk maps, town maps and road maps having 800 entries.

A few more catalogues were published during the late 19th century from Bombay, Calcutta and Simla. India's Marine Survey office, Bombay published in 1895 listed a few charts of Indian waters. Similar Catalogue of the Imperial Forest Survey office, Dehra Dun in 1895 listed their holdings. Even for the exhibition of Paris 1878 or at Edinburgh 1884, a separate catalogue of forest maps relating to forest administration in the provinces were published. The Asiatic Society of Bengal, Calcutta, listed maps along with books which was published in 1856. An attempt was made by the Surveyor General Office, Calcutta, in 1827-29 to publish a descriptive catalogue of maps and geographical materials but finally it could not be published in a printed form.

Doubtful provenance of maps in India :

The above catalogues may be of some help for overall bibliographical control of rich materials but whether these maps still exist or not, is not known. If at all they exist, their physical condition, location and call numbers all must have changed by this time. The Maps and Plans Catalogue of the then Imperial Library (now the National Library) published in 1910, has undergone such changes.

The other points which emerge are, whether such listed old maps are still safe in India. It has come to the notice of the general public that India is losing every day such valuable documents. In recent years there is a strong trend in the west to study and photograph the so called "TRADITIONAL MAP OF INDIA". These maps are drawn freely by hand and profusely coloured. Such materials have much cartographic value and certainly deserve notice from bibliographic point of view.

Bibliographical Control of maps : Importance

Political disturbance and use of maps (old and new) go side by side. In India, we all are witnessing problems relating to boundaries of States of the Union, such as Assam, Nagaland, Punjab and Haryana and there is an immediate need of listing the maps available in different corners of the country. Boundary problems among the States has become now a regular issue and the basis of all such claims are mostly based on pre 1947 maps, giving therein possible boundary demarcation, drawn long ago. In order to avoid such problems as well as keeping the maps listed in proper form, due precaution has to be taken right now. During the time of need, such maps must easily be located and analysed.

National Library's initiation :

Indian Cartographic Association has already appointed a commission to go into the survey of map collections of India. They will be first visiting such centres and evaluate the maps after physical verification. It is an opportune moment for the National Library to make efforts to bring about bibliographical control of maps and allied materials by establishing a workable co-operative relationship with the Commission.

A step has already been taken by the National Library for locating the various institutions having maps and atlases. The response to the questionnaire, prepared for this purpose, has been encouraging and indicates existence of valuable items that remains scattered without proper listing.

While collecting information about map collections of the country, the author had to take recourse to the familiar questionnaire method which in our country, has seldom been successful. Short of visiting the places there is no other method which can yield desired results. Despite this constraint, the author issued questionnaires and pursued with reminders at regular intervals. Over a period of 6 months, out of 160 questionnaires 66 have been responded. A cursory analysis gives some information though in totality the picture remains incomplete. The questionnaires were sent to University libraries, Archival Institutions, Research Institutions, Govt departments and Scientific Laboratories.

The total number of maps and atlases are given in the replies though, in other details many replies are wanting.

It is revealing that on the sheer number of maps, National Atlas & Thematic Mapping Organisation stands pre-eminent by having over 80,000 maps and 325 atlases. It remains fantastic and unless the type of maps are known, it is not possible to say whether this credit can go to it. Next

comes Geological Survey of India (Main Library) Calcutta with 20,000 maps, Department of Archives, Bombay has 10,000 maps. One would expect Institutions like Sarasvati Mahal Library (Thanjavur) to have a good number of maps but it is disappointing to see that it has only a few 17th century maps. Bharat Itihas Sanshodhak Mandala (Pune) has over 2,799 maps. There are many institutions with large collection of maps *e.g.*, University of Poona (5194), Deccan College, Pune (4,777) and Anthropological Survey of India, Calcutta (4,298) etc.

The study of the replies to the questionnaire reveals that only very few institutions have brought out their check lists or catalogues and without them it is not possible to know the nature of the collections. However, Department of Archives, Bombay and Bharat Itihas Sanshodhak Mandala, Pune can be mentioned to have checklist/catalogue for their collections. As most of the Institutions/Libraries are closed access perhaps due to this, systematic catalogues/checklists have not been taken up and rest of the libraries of India do not have any idea of their collection.

Regarding the oldest maps available, it is surprising that a few old maps can be found in places like Central Library, Goa and Prince of Wales Museum, Bombay. The Tamil Nadu Archives, Madras has 1,534 maps and it is a fine collection of maps of 18th and 19th century.

What has been narrated briefly above, gives only a glimpse of the resources that lie buried unnoticed in different collections of the country, Serious efforts should be made, if necessary, with the provision of resources from the Central Government before many maps disintegrate.

Record creation :

Any standard code may be accepted for the formulation of an union catalogue indicating the availability of maps and atlases in different libraries.

An union catalogue, if printed, will help the participating libraries/institutions to locate the materials and use them. A simplified union catalogue with essential information such as, title of the map, scale and year of publication will serve the users without much difficulty.

Subject headings may be given with area subdivisions and if possible with an area-subject reference card may be made to this subject-area card. Apart from the help one gets from the Library of Congress list of subject headings, one has to create more subject headings suitable for Indian condition. This may be a small attempt for the bibliographical control of maps.

In the realm of retrospective and current bibliography of maps and atlases the following suggestions are put forth :

(1) Current publications of maps and atlases may be included in the Indian National Bibliography. As per Richard W. Stephenson's survey thirteen National Bibliographies of Western Europe, five from Eastern Europe, two from Australasia, one each from Africa, Asia, Latin America & North America, contain entries about maps and atlases.

(2) Maps & atlases being mostly government publications, the catalogue of the Government of India, Civil Lines, Delhi, monthly list supplement to the catalogue (Survey of India Catalogue) and New Arrivals (Trade Catalogue) of New Jain Book Agency, New Delhi have to be consulted. Second hand bookseller's catalogue, viz., M/S. Ranjan Gupta, Galiff Street, Calcutta, may yield valuable information.

(3) In India, there are fifty-seven geographical journals which are published Quarterly and Annually from different cities of India. They review books as well as maps and atlases. Current publication's information can be had from these journals as well. An index to the various reviews of maps and atlases may be brought out.

Conclusion

In short, an effective bibliographical control of maps and atlases available in a desideratum. To realise this object it is necessary to have :

(1) A union catalogue by adoption of standardised form of entry and co-operation between the participating organisations to build it.

(2) The National Library, Calcutta, should co-operate with Indian Cartographic Association in the proposed commission for locating maps in different libraries/institutions.

(3) Standard subject headings and new subject headings should be compiled by the Indian Cartographic Association.

(4) Indian National Bibliography should be persuaded to include maps and atlases as supplementary on the basis of the entries supplied by the Map Division of the National Library, once in three months.

(5) Government catalogues containing entries of maps and atlases should be updated at frequent intervals.

(6) Index to reviews on maps and atlases may be brought out twice a year by the Map Division of the National Library.

(7) A machine readable catalogue for maps/atlas may also be attempted.

BIBLIOGRAPHIC CONTROL IN KANNADA LANGUAGE MATERIAL

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Kannada Bibliographical Project :

I had the pleasure of working in the National Library for a week and collect bibliographic data for the Kannada books collected here. We were able to find here some very rare books printed before 1900. As you are perhaps aware, Kannada Bibliography is a major project undertaken by the University of Mysore to collect and publish bibliographical data of all books printed in Kannada from 1817 (the year when the first book was printed at Serampore near Calcutta) upto 1968. We visited about a hundred major and minor libraries of the country and many private collections. In two years we were able to collect data of about 70,000 books. Vast material thus collected has been edited, classified and published in separate volumes according to the subject. Till now, seven volumes have been published covering (i) Science, (ii) Generalia, literary criticism, poetry ; (iii) Language-linguistics—art—philosophy ; (iv) prose-essay-drama ; (v) Novel ; (vi) Children's literature ; (vii) Translation into Kannada from other languages. Three more volumes are to appear. In the meanwhile taking note of the uniqueness of the project, the University of Mysore, has converted it into a permanent section in the Prasara, the Publication Wing of the University. As a result of this, annual supplements of the Kannada Bibliography are being published and we have so far covered the field upto 1980 in four volumes (1969-70-71 ; 1972-73 ; 1974-75-76 ; 1977-78-79-80). With the able guidance of Sri K. S. Deshpande, an eminent Librarian of the country, and with timely consultations and suggestions given by Sri B. S. Kesavan, a giant in documentation and former Librarian of the National Library, the Kannada Bibliography project is progressing well. On the basis of the experience got first as research assistant and then as an Editor in compiling and editing the Kannada Bibliography, and also in publishing Granthaloka, a monthly Book Magazine devoted to publications in Kannada, I venture to say a few words before this learned audience about Bibliographic control in Kannada. Although my opinions are based on the Kannada Book publishing mainly, they may yet be found true with reference to the publications in other Indian languages also.

Bibliographical Control in Kannada :

We have found it extremely difficult to keep track of the books published in Kannada for four main reasons. Firstly, there is a dearth of source material readily available such as printed catalogues, booklists etc., for a bibliographer. There are a few successful attempts to publish bibliographies of books of an author. Dr. H. M. Nayak, an eminent writer and critic who is at present the Vice-Chancellor of the Gulbarga University, has compiled and published two such bibliographies 'Gokaka Granthavali' and 'Mastiyavara Pustakagalu'. Dr S. K Havanur and Shekhar Idya compiled a Bibliography of the works of Shivarama Karantha and included it in the felicitation volume. Another attempt covers the works of Sham. Ba Joshi. In 1982 a descriptive bibliography of Dr. C. P. Krishna Kumar was published (CPK-Nuru). Except such individual attempts, there has not been a general Bibliographic source as such.

Secondly we do not find a single institution or agency which collects all the printed material in the language. The Kannada Sahitya Parishat at Bangalore and The Mysore University Library of Mysore say that they buy any book printed in Kannada and sent to them. But still we don't find even in these places more than 50% of the published material. May be that all publishers in Karnataka are not aware of the facility or the machinery set up for this work is not functioning efficiently. There may also be other reasons not known to us. Anyway, we are witnessing a situation where even direct buying has not attracted all the publishers. Such being the case how can we expect the collections at the National Library, where publishers are expected to send a copy of each publication free, to be comprehensive ?

Defects in Kannada Book Publishing Scene :

All of us argue that it is the duty of each and every publisher of the country to send a copy of each book he publishes to the National Library according to Delivery of Books Act. Similarly he has to send book to other recipient libraries at Delhi, Bombay and Madras. He has also to send a copy to the Central Library of Karnataka at Bangalore and one to the Deputy Commissioner. In all he has to supply six copies free of cost. But most of them are not doing this. I may point out a strange thing as far as Kannada is concerned. Most of the publishers here are not regular publishers at all. It is not a full time profession for them. They are usually lecturers, teachers in colleges and schools. Availing loan facility from various banks, they publish their own books and occasionally one or two by their friends. As they do not have proper marketing experience as well as facilities, they not only cease to be publishers but involve in debts and their interest in the field ends up there. I shall revert to this

problem later. Thus, the requirements of the Acts are not known to most of them and those who come to know, do not realise the implications and advantages of their books being recorded properly. On the other hand the established publishers, who are very small in number, ignore the provisions of the Acts and abstain from sending books for, they think that the price of six copies they are required to send free is of more value than what they get in return by way of documentation and publicity.

Lack of Bibliographic sense :

I am convinced that most of our publishers are quite unaware of the Bibliographic sense in publishing. Is publishing merely converting manuscript into a printed book in whichever manner they are pleased or circumstances permit and *push* the copies to libraries as early as possible and grab money? They do not bother to see the book is printed in conformity with the standards in vogue. Hence we find occasionally books without a proper title page, verso providing all necessary bibliographical data. It is not uncommon to see a book without the year of publication or even the price printed. This lapse is not always due to negligence, but is due to sometimes to calculation. When the public libraries specify the year of publication for bulk purchases, the cute publisher stands to gain by printing and pasting a label giving the year as required. So he does not care for the disadvantages caused to the bibliographer.

Malpractices of the publisher :

I think I may draw your attention to two more malpractices of the intelligent publisher which mislead a bibliographer. 1000 copies of a book are printed and only 300 copies are bound with a title page giving March 1980 as the publication year. After they are 'pushed' to libraries or sold out, another set of 300 copies will be bound with a different title page calling it the second edition and giving May 1980 as second edition date. The remaining copies will be bound after some months with verso page saying third edition and the date as August 1980. The publisher now declares that his book has run three editions in one year and is a highly popular one. It will be a very difficult task for the bibliographer to detect the mischief. Another clever practice is to print and publish a book of 600 pages first and sell at a very high price and after a few months, to break the same into 3 books of different titles and retaining or even increasing the price. The page numbers will be progressive and our friend does not bother about the oddity. But who cares to detect these defects except a helpless Bibliographer and why should he do? As long as there is a title page and a format of a book the mischiefs are legalised.

Even our booksellers are not lagging behind in the task of confusing the bibliographer. Some of the established booksellers do not print the

price of a calico or deluxe edition in a paper back and price of a paper back in a deluxe edition. When a bibliographer takes a calico bound copy in a library and prepares a card, it does not give complete information at all. Because, there will be a paperback edition of the same book with a different price. By the time he comes across this second type, chances are more of his not taking notice of the book at all. I know of another type of bookseller. He buys 200 or more copies (the exact number depends upon his confidence of getting library purchase orders) from the publisher who is new to the field and who belongs to the first type I have mentioned earlier, i.e., author-publisher. He buys unbound but sewn or pinned copies at 60% discount. The publisher, not knowing the secret behind this swindle, feels extremely happy to see 200 copies of his book sold 'even unbound' and readily allows 60% discount. What does our good friend do? He has paid Rs. 4/- to the publisher for a book of Rs. 10/- He spends some 75 paise on board and 75 paise on a cheap cloth which he calls "superior calico". He spends about 20 paise for setting the binding. But he prints the price of this "deluxe edition" as Rs. 40/- or 50/- by a rubber stamp or a printed slip pasted. He is sure of a library order for those 200 copies. He supplies these books immediately and gets paid. He makes a huge sum even after discount is allowed to the libraries and other expenses. What I mean by the other expenses is too well-known to be mentioned here. The books never come to the market. They are dumped in a corner of a City Central Library or District Central Library or even State Central Library. How could a bibliographer track these books which are not on the stands and are not known to readers?

No proper hold on publisher :

Added to these difficulties, there is another important point to be considered. As such we don't have any hold over the publishers. Even to become a printer one should obtain a licence from the authorities concerned, but to become a publisher no such thing is necessary. The only two things required to become a publisher are a name of his choice and a pad of letter-head. That is why we have not been able to list all the publishers in a region. Since they are mainly author-publishers they will not be permanently staying in the one place for a long time and that is why often the registered letters sent by the National Library return with a note that the "addressee not available". Hence the very basis of an effective control over publications is not working properly.

Please do not think that I have come here to enumerate only the defects seen in the Kannada book publishing scene to-day. Books of various types, designs, volumes, sizes and prices are being published every-day. Four books are coming out per day on an average at present. There is ample variety. Quality of production is improving very fast.

As the number of titles and publishers are increasing it is becoming more and more difficult to follow and record them. While I am proud of the quantity and quality of books produced, I am sorry to see that no effort is being made to collect all the published material in one single place.

How to improve Bibliographic Control :

Let me share my thinking about solving these problems and improving the bibliographic control. Firstly, an exhaustive list of all publishers, both established as well as author-publishers is to be prepared. Granthaloka has been attempting this in a humble way. A folder explaining (1) the Acts and their provisions in detail and (2) a model for preparing preliminary pages of a book is to be prepared in Kannada and sent to each one of them. I learn that Indian Standards Institute have prepared a specimen in this respect and the same may be translated into all regional languages and sent to the publishers.

Secondly, as a model for others, one or two established publishers who are not sending books in conformity with the Acts have to be pinned down and legal action should be taken against them in proper procedure. This will definitely have an influence upon all the others.

Thirdly, a person who is really book-minded and who is involved in various activities concerning books may be designated as a representative of the National Library and may be authorised to collect books on its behalf. We can expect better results by doing so because, he will be in the language area concerned and will be familiar with most of the publishers in the region. He may occasionally visit the publishers and keep track of the publication activity going on there. It will be definitely easier for an author-publisher to send his book to the concerned representative for onward transmission to National Library. Necessary authorisation may be provided to such a representative. If necessary, a token honorarium may even be offered to him.

May I ask the authorities concerned, whether it is beyond their capacity to provide for the purchase of one copy each of all publications every year? As far as Kannada is concerned, about Rs. 25,000 per year are quite enough to buy everything that is published during that year. I believe it is worth spending six to eight lakhs of rupees a year in order to make our national record upto-date, authentic and comprehensive to the maximum extent. Of course, it is true that mere financing does not serve our purpose, as we have seen above, without proper and timely utilisation. I have mentioned the cases of Kannada Sahitya Parishat and Mysore University Library already. The person who will be a representative for the National Library may be entrusted with the responsibility of acquiring books and transmit them to National Library. This proposal may not be

so easy as it looks, but I suggest that one or two language areas may be selected in the beginning and experimented.

We have various Publishers' Associations and Guilds both at the regional and at the national level. Usually they feel their duty done when they help member-publishers to carry on with their work without obstacles, get printing paper at concessional rates, reduce the rate of discount to the libraries, sell maximum number of copies through various schemes like Raja Rammohan Roy Library Foundation and other State and Central Library bulk purchases and so on. Through their co-operation a major gap in the bibliographic control may be filled effectively. It should become the responsibility of these associations to see that member-publishers do send their books without delay to the libraries concerned.

Finally, it should be made compulsory for a publisher to register himself before he indulges in book publishing activity. This has to be recorded in the Central Reference Library or National Library so that they have a regular correspondence with the publisher.

Kannada Granthasuchi :

In recording the books published in Kannada, the first major official document is the Kannada Granthasuchi, which I referred to earlier. The layout is quite comprehensive. Every entry in the Kannada Granthasuchi gives 18 points of information about a particular book : (1) subject, (2) author, (3) title, (4) co-author or translator or editor, (5) his date of birth, (6) date of death if he is not alive, (7) pseudonym, (8) place of publication, (9) publisher, (10) year of publication, (11) year of first publication if it is a second or subsequent one, (12) size of the book in centimetres, (13) number of pages, (14) number of plates if any, (15) nature of binding, (16) price of all editions if there are more than one, (17) the place or library where the book was found, and finally, (18) a very brief annotation regarding the theme of the book. If it is a collection of articles or a felicitation volume all items on the table of contents are reproduced re-arranged alphabetically authorwise. We know that it would have been much more useful if transliterations in English were given to relevant portions of each entry. But because of the volume and cost, we are not doing this. I have here one or two copies of the specimen fascicule we brought out with transliteration.

Granthaloka and its coverage for INB :

Granthaloka the book magazine is in a way a basis for the kannada Granthasuchi. The bibliographers of Kannada Bibliography visit four or five major libraries of the state every year for collecting the data. But

they do not find most of the books because of two reasons ; (1) Many books will not yet be placed in shelves in the library when they work there (even after two or three years of publication) and again many of them will have been borrowed by the readers. (2) In the present setup all books published are not coming to the libraries at all. I have already mentioned about this problem above. Under the circumstances Granthaloka bridges the gap considerably.

(1) By having regular contacts with publishers and their programmes ; (2) by visiting the major book shops regularly ; (3) by recording the books received for review and notice in the weekly supplements of Newspapers and other journals and (4) by regularly watching the books-received columns-of the leading dailies in Kannada, I have been able to collect data for about 1300 books every year. In addition to these steps, I take note of the books acquired by Dr. H. M. Nayak who is the chief adviser of Granthaloka and a few others every month. I started this magazine in the year 1977 with a firm idea of devoting it entirely to books and problems of book publishing in Kannada. At present I print 2500 copies which are being distributed all over Karnataka, and sent to some places like New Delhi, Calcutta, Madras, Chandigarh, Gauhati, Bombay and two copies to New York and two to Moscow. It is not limited to any one subject or any one group of writings. In this sense, the scope of Granthaloka is vast. Experts like Abdul Hasan, B. S. Kesavan, and many other scholars, literateurs and Jnanpith awardees—have praised it as a unique work. I don't know whether such general book magazine is being published in any other language and I will be most happy to be enlightened in this regard. Granthaloka is published on the first day of every month and I am proud to say that not even once it has been a delayed publication. It is the advantage of being a private venture. Contents of Granthaloka include articles on various problems of book industry, book promotion and marketing, brief notices about new books, reviews of some important publications, book news and other relevant matter. In the year 1980, I gave a list of booksellers and publishers in Kannada. In 1981 I brought out a special issue on Sahitya Academy and in 1982 about National Book Trust. In 1984 the January issue was a special number introducing all Ph. D. theses published in Kannada so far. Most important part of Granthaloka is the *suchi* or the bibliography given at the end. It gives information of general interest about the books published in Kannada during the preceding months. In the month of June every year another special number will be brought out surveying the total output of the preceding year. Books are grouped subjectwise and exhaustive articles giving the important titles, highlighting the trends are written by different scholars. To celebrate the successful completion of 100 months of its publication, Granthaloka of April 1985

has been published as a special number in a big way. One hundred short but informative articles written by experts are included in it and the issue is called "Granthalokada Nuru Mukhagalu" (one hundred facets of Kannada Book World). In addition to regular numbers, a volume called Varshika Granthavali will be published. This is an Annual Bibliography covering the books of the preceding year. So far "Varshika Granthavali" of 1980 and 1981 have been published and two more covering 1982 and 1983 are in manuscripts. I have not been able to print them due to lack of encouragement and finance.

In this way Granthaloka forms a substantial basis for a Bibliographer to work. It is evident that Varshika Granthavali and Granthaloka provide a more comprehensive coverage for the INB. The bibliography of Granthaloka is authentic for, I prepare the data card actually keeping the book before me. I don't rely on any other means for this. If at all I gather it from secondary sources like Books-received columns of newspapers, I put an asterisk at the beginning of the entry.

Conclusion :

To-day Kannada book publishing is fast progressing and as a recent development we see twin novels as one book. Plastic laminated covers are already old. There is an attempt to bring out an anthology of poems entirely in screen printing. There are different types of felicitation volumes and we see experiments in producing books for children and neo-literates. There are quite a big number of text books on each and every field of science, technology and humanities. All these are creating a challenge to a bibliographer. What I have tried to explain here pertains mainly to Kannada. But all these things may equally apply to other languages of the country. I sincerely hope and wish that with co-ordinated and methodical work, the gap found in the Bibliographical Control in the regional languages and thereby in the INB will be bridged effectively.

**BIBLIOGRAPHICAL CONTROL IN TAMIL NADU
AND HOW TO BRIDGE THE GAP IN THE COVERAGE
OF TAMIL NADU STATE BIBLIOGRAPHY FOR TAMIL BOOKS**

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Introduction :

Bibliography, the art or science of the description of books, has acquired special importance in the 20th century because of the need for effective organization of the records of human communication in the face of the enormous growth of publishing activity and the need, especially in undeveloped countries, for informed access to the world's scientific and technical information. It has been said that without bibliography, the records of civilization would be an uncharted chaos of miscellaneous, contributions to knowledge, unorganised and inapplicable to human needs.

Dorothy Anderson sums up that ever since published materials appeared in gratuity—since the advent of printing—in fact, Librarians have been concerned with problems of controlling the bibliographic record of that material, and in the process, have developed an assortment of bibliographic tools with their purpose to supply answers to a variety of questions.

Bibliographies can be classified into two main groups. 1. Critical bibliographies (describing the physical appearance of books) and 2. Systematic or Enumerative bibliographies, the history of books, manuscripts and other publications arranged in some logical order giving author, title, date and place of publication, publisher, details of edition, pagination, series and literary contents

Recent Developments in Bibliographical Activities :

Certain development in bibliographical activities that took place throughout the world during the past 25 years have direct implications for bibliographical services at every level both in the developed nations and the developing nations.

The literature available on these developments is sufficiently comprehensive and large. Each one of them is a crucial topic for deliberation. Standardisation activities concerning the bibliographic record help bringing

at the international level uniform practice regarding the formats of bibliographic record for various types of library material and the access points to be provided to such records. The experience gained by the agencies—national, international and governmental—that could successfully launch different kinds of bibliographical services, would be of immense help to bibliographical service systems which are to be developed and are being developed.

Bibliographical Service :

Librarian's Glossary defines the term "Bibliographic service" as the facilities, procedures and devices which are employed to produce a bibliography consisting of continuing services of publication of bibliographical information as requested. Thus the term Bibliographical service is used to devote something more than the compilation of Bibliographies.

Bibliographical Control :

Bibliographical services of different kinds at different levels result in the systematic listings of the records of human communications. All such listings together form the basis for the development and maintenance of a system of adequate recording of all forms of material published and unpublished, printed and audiovisual or otherwise which add to the sum of human knowledge and information which is called bibliographical control. Thus we may consider bibliographical service as the means to achieve the end product namely the bibliographical control.

Need for Bibliographic Control :

'Information explosion', 'information flood', 'Paper storm', 'Literature explosion' etc., are the evocative terms coined to draw attention to the dramatic growth of literature. The published literature is so vast even in the most limited fields. Works that have been completed and published are often duplicated either due to unawareness of published reports or due to the fact that the cost of repetition of research is cheaper than the cost of carrying out a detailed literature search.

There are a number of examples of what ultimately appear as highly significant discoveries lying unnoticed for years in the literature due to the lack of adequate bibliographic control. The literature on the 'growth of literature as a phenomenon' is very vast and the 'apparent growth' and 'actual growth' of literature estimated vary from authority to authority. Though growth of literature is exponential, the duplicative, repetitive and redundant nature of bulk of this literature compels the librarians to be increasingly selective.

Present Trend :

The present trend is for more and more speed in the production of bibliographic records to cut down the time lag between the publication date and the appearance of bibliographical record. It is learnt that the time lag between the publication date and the appearance of the bibliographical record of current publications is considerably low in the United States, Great Britain, Canada, and Australia when compared with other Nations.

Bibliographical Control in India :

As one of the major book producing countries of the world, India is far behind in bibliographic control when compared with other nations. Since India is a vast country with diverse languages and has contributions in various branches of Education, Science and Culture, it is a massive problem to achieve a comprehensive bibliographic control. However, during the past centuries, various organisations and Individuals in addition to Governmental efforts, have contributed to a greater extent for achieving Bibliographical control.

Press and Registration of Books Act :

The enactment of the Press and Registration of Books Act in 1867 opened a new vista for building up the Bibliographical control in India. Catalogue of books printed and received by the various governments of British Indian States proved very helpful and primary sources. Similarly the printed catalogues of the then Imperial Library (Now National Library) Calcutta and other important libraries in India are also quite formidable and will supplement the earlier mentioned catalogue.

Connemara Library Author Catalogues :

Special mention may be made here about the efforts taken by the Connemara Public Library, Madras, one of the oldest libraries in India in this direction. The first volume of Author catalogue for the books available in the library was published in 1908 and four supplements were continuously published upto the end of March, 1912. A revised Author catalogue of the library was published in two volumes in 1931 and later the first supplementary Author Catalogue of book was published in 1935. In addition to this, a number of separate subject indexes were published between the years 1896 to 1900.

The Sahitya Akademi has also published the National Bibliography of Indian Literature (including English) for the period 1901 to 1954.

Indian National Bibliography :

The next bold step that was taken in this direction was the Indian National Bibliographical project. The first issue of Indian National Bibliography, a product of the Central Reference Library, Calcutta was published as a quarterly in 1958 with annual cumulations till 1963. Then its periodicity was changed to monthly from January 1964 with usual annual cumulative volumes. It is learnt that due to unavoidable circumstances beyond the control of the Central Reference Library, the monthly issues had been suspended after 1977. But at the same time persistent efforts were made to restore the periodicity to monthly as in 1964 and to revive its services to its clientele.

Bibliographical Services in Tamil Nadu :

Tamil Nadu was the first State in India to pass the Public Libraries Act as early as in 1948 in order to organise and extend free public library facilities to the citizens of the State and thus has created library consciousness among the public. This has also created some conducive atmosphere to start the Bibliographical services in Tamil Nadu.

The history of Bibliographical Services in Tamil Nadu may be conveniently divided into two parts namely :

1. Retrospective and
2. Current.

Retrospective Bibliography :

Following are some of the maiden attempts for the compilation of retrospective bibliographies of Tamil Books.

1. Murdock (J) .. Classified catalogue of Tamil Books with introductory Notes, 1865.
2. Barnett (L.D.) & A catalogue of Tamil Books in the library of Pope (G.U.) .. British Museum, 1909.
3. Barnett (L.D.) .. A supplementary catalogue of Tamil Books in British Museum, 1931.
4. Tamil Nadu Directorate of Tamil Development .. Tamil Bibliography Vol. I to VII covering the period from 1867 to 1935.

Among the above four "John Murdock's classified catalogue of Tamil printed books with Introductory Notes, 1865" is considered to be more authentic and useful to the scholars. Similarly "A catalogue of Tamil Books

in the Library of British Museum, 1903 by G. U. Pope and Barnett and its supplement of 1931 are the primary sources for the research students on Tamil language and literature. Scholars from all over the world who frequently visit British Museum are greatly benefitted in their studies on Tamil Publications.

Similarly, Tamil Bibliography project started in 1960 by the Government of Tamil Nadu under the Tamil Development Department has completed 7 volumes in 23 parts so far covering the entire period between 1867 to 1935; volumes for the period from 1935 to 1957 are under preparation.

When the entire project is completed, there shall be a single source that would provide bibliographic entries about Tamil Books published during a period of 90 years from 1867 to 1957. A detailed list of Tamil bibliographies of the Tamil Development Department, Government of Tamil Nadu, Madras is given in Annexure III.

Thus the coverage of all the above sources when put together will be fairly comprehensive as for Tamil Books published from this region are concerned.

Current Bibliography :

The enactment of the Press and Registration of Books Act of 1867, can be considered as the first step, which brought up a frame work required for the bibliographical service in the old Madras Presidency. The first authoritative periodical list of current publication produced in the region came into existence in the year 1867 and continued till 1960's. From its very inception, this had been appearing as Quarterly supplement to part IB of Tamil Nadu Gazette. In fact, the purpose of this Gazette notification was to provide with the authentic recorded evidence for having obtained the registration for documents.

Delivery of Books Act, 1954 :

The next important land mark for creating a system of Bibliographical control was the enactment of the Delivery of Books (Public Libraries) Act of 1954, which declared the Connemara Public Library, Madras as one of the four recipient Libraries in India, with effect from September 10, 1955. This provision has created a helpful atmosphere for the publication of Tamil Bibliography by the Connemara Public Library.

Tamilnadu State Bibliography for Tamil Books :

Subsequently, the Connemara Public Library started compilation and publication of the Bibliography of Children's Literature in Tamil with

effect from 1963 and then the Tamil Nadu State Bibliography for Tamil books from 1964. Both these Bibliographies were merged as one and being published with the caption "Tamil Nadu State Bibliography for Tamil Books" with Asterisk for Children's book from 1969 onwards. A detailed list of Bibliography for Children's Literature in Tamil and "Tamilnadu State Bibliography for Tamil books" so far published are given in Annexure I and II respectively.

Absence of source tool for new publication :

Under the provisions of the Delivery of Books (Public Libraries) Act, 1954, the Connemara Public Library, Madras is receiving Tamil books, periodicals etc. in addition to other language materials published in India. The practical difficulty for current assessment of the receipts under the Act is to identify what had been published and to find out what had not been deposited. Details of Tamil Books received in the Connemara Public Library, Madras under the Delivery of Books Act is given in Annexure IV.

Gap in supply :

A casual study of the list of books so received in the Connemara Library reveals certain percentage of Tamil publications especially those which are brought out by the Author-Publishers, small commercial publishers, Government and corporate agencies. Similarly publishers of multi-volumed and costly books are also relevant to deposit.

Reasons for the Gap :

Following may be some of the reasons for such non-compliance of the provisions of the Act.

1. Ignorance of the existence of the Act and its provisions.
2. Purposeful negligence on the part of certain publishers.
3. Additional expenditure and loss in sending the publications to all depositories.
4. Heavy loss in case of multi-volumed and costly publications.
5. Lack of follow up and severe action on the part of authorities.
6. Absence of central agency or machinery either at National or State Level to find out the new publications then and there.
7. Lack of cooperation between the Depositories and publishers.
8. Lack of coordination among the depository centres.

Measures for filling up Gaps :

Following measures are suggested to fill up the gaps in receipts.

1. Due and constant publicity eliciting the provisions of the Act through all medias may be given throughout the country.
2. Transit charges for sending the books to the Depositories may be met by the recipient libraries.
3. Provision of adequate men and materials to the Depositories may be made to take follow-up actions.
4. Setting up of central agency both at the States and National levels so as to identify the new publications and bring to the notice of the Depositories concerned.
5. Institution of awards to the regular publishers who send their publications then and there.
6. Convening of Annual and Half-Yearly conferences and periodical seminars of Librarians, authors and publishers to discuss about practical difficulties and to find out solution for the successful implementation of the provisions of the Delivery of Books Act.

*Tamil Nadu Efforts :—**1. Centralised Book Purchase System :*

In order to execute the legal depository provisions of the Act, the Directorate of Public Libraries, Government of Tamil Nadu has been adopting an effective method from the year 1973-74. Instead of purchasing books at each District Head quarters required for all the service units of the district, a Centralised book purchase system by which suitable books will be selected by a State Book Selection Committee and bulk orders will be placed for 400 to 800 copies in each selected item by the Directorate of Public Libraries. Before the orders are placed, it will be insisted and duly verified whether those titles had already been delivered free of cost to the Connemara Public Library and other Depository Centres under the Act. Thus all the publishers were duly reminded to deliver free copies to the Depositories in their own interest for getting bulk orders for their publications. This process had helped to bridge the gap to a great extent.

2. Monthly Book Introductory Functions :

The Connemara Public Library in collaboration with the District Central Library, Madras is organising books introduction functions every month.

Monthly meetings are convened at different centres of the city in which two to four suitable Tamil books among those books received in the Connemara Public Library will be introduced by the subject expert and scholars. Besides, an exhibition of all the new Tamil books so received in the Connemara Public Library will also be displayed on the day. By both these methods, due publicity to all the new books supplied under the Act is given at the cost of Government. Such monthly book introductory functions are being held in all the important centres throughout Tamil Nadu.

Thus the publishers and authors of such books are greatly satisfied that the free delivery of books to the Connemara Public Library get adequate publicity among the reading public. Thus the gap in supply of books under the act is avoided to a greater extent.

Tamil Nadu State Bibliography for Tamil books :

By way of bringing out monthly fascicule of Tamil Nadu State Bibliography by the Connemara Public Library for all the books received during that month, Publishers, Authors and Readers are able to find out the latest books published in Tamil language. This bibliography is freely circulated to all the major libraries in India and District Central Libraries in Tamil Nadu. Thus the publishers are convinced that their publications are given due publicity as and when they deliver the books to the Connemara Public Library.

Conclusion :

The need for the National Bibliographical control is realised all over the world. In a vast multilingual country like India with significantly high book production, the Depository Libraries as well as the State Central Libraries have a definite role to play in achieving the national bibliographic control. Though more than three decades have passed since the enactment of the Delivery of Books Act, which aims to provide access to all publications produced in the country at four different centres, each for one region, the major objective of the Act remains yet to be fully achieved. This calls for a review of the provisions in the Act itself and also restructuring of the National Bibliographical Service System. Bibliographical services at the state level should be aimed and implemented so as to act as an input to the National Bibliography.

ANNEXURE-I

CONNEMARA (STATE CENTRAL) PUBLIC LIBRARY
MADRAS-8.

Details of Publication of Bibliography for Children's Literature in Tamil.

Serial No.	Year	Year of Publication	No. of titles covered
1.	1963	1965	262
2.	1964	1971	178
3.	1965	1973	184
4	1966	1974	124
5.	1967	1976	164
6.	1968	1976	145

From 1969 this has been merged with the Tamil Nadu State Bibliography for Tamil Books.

ANNEXURE-II

GOVERNMENT OF TAMIL NADU

CONNEMARA (STATE CENTRAL) PUBLIC LIBRARY

MADRAS-8

Details of Publication of Tamil Nadu State Bibliography for Tamil Books

Serial No.	Year	Year of Publication	No. of titles covered
1.	1964	1972	551
2.	1965	1972	637
3.	1966	1969	541
4.	1967	1976	620
5.	1968	1976	839
6.	1969	1977	484
7.	1970	1979	868
8.	1971	1977	615
9.	1972	1983	587
10.	1973	1981	963
11.	1974	1983	675
12.	1975	1977	949
13.	1976	1983	1053
14.	1977	1984	1732
15.	1978	—	1302 with the press.
16.	1979	—	1562
17.	1980	—	1121

ANNEXURE-III

GOVERNMENT OF TAMIL NADU

TAMIL DEVELOPMENT DEPARTMENT

Details of Tamil Bibliographies Published so far

Period of Coverage	Vol.	Part	Year of Publication
From 1867 to 1900	Vol—1	Part— 1	1961
” ”	”	” —2	1962
” ”	”	” —3	1963
” ”	”	” —4	1964
” ”	”	” —5	1964
From 1901 to 1910	Vol. 2	” —1	1965
” ”	”	” —3	1972
From 1911 to 1915	Vol. 3	” —1	1972
” ”	”	” —2	1972
” ”	”	” —3	1977
From 1916 to 1920	Vol. 4	” —1	1972
” ”	”	” —2	1972
” ”	”	” —3	1972
From 1921 to 1925	Vol. 5	” —3	1972
From 1926 to 1930	Vol. 6	” —1	1978
” ”	”	” —3	1980
From 1931 to 1935	Vol. 7	” —1	1981
” ”	”	” —2	1983
” ”	”	” —3	1978

ANNEXURE-IV
GOVERNMENT OF TAMIL NADU
CONNEMARA (STATE CENTRAL) PUBLIC LIBRARY, MADRAS-600 008
Tamil Books Received Under Delivery of Books Act from 1975 to 1984

Subject	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Generalia	10	21	35	10	13	31	30	22	20	12
Research Methodology	—	—	—	4	3	1	1	—	—	—
Area study	—	—	—	—	3	2	1	2	—	—
❧ Biography	71	65	134	87	70	71	72	46	40	47
Library Science	2	1	—	5	5	3	7	2	5	—
Natural Science	7	5	10	20	15	11	7	9	10	17
Mathematics	10	10	1	2	25	3	2	3	1	—
Physics	2	4	1	1	15	—	—	3	—	—
Engineering	10	20	18	12	8	9	18	7	13	10
Chemistry	4	11	—	2	9	—	5	—	—	2
Technology	1	—	1	1	2	—	—	1	1	—
Biology	—	5	1	1	7	1	—	—	—	1

ANNEXURE-IV—Contd.

Subject	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Geology	1	1	1	—	5	—	1	3	—	—
Botany	1	2	1	8	8	2	1	4	—	—
Agriculture	4	2	5	2	7	4	10	6	4	5
Zoology	4	7	4	2	11	2	6	3	1	7
Medicine	50	79	53	40	83	34	56	45	36	46
Useful Art	19	20	33	42	35	46	71	56	53	68
Fine Arts	3	7	4	5	8	10	10	14	4	7
Literature	492	511	1,069	750	861	632	672	590	63	335
Linguistics	33	23	36	28	39	24	31	23	25	18
Religion	86	79	120	113	90	72	93	103	46	72
Philosophy	31	31	56	42	32	56	33	56	43	24
Psychology	4	4	15	8	12	10	11	14	6	7
Education	7	11	20	22	21	4	6	7	10	1
Geography	17	14	22	13	24	10	18	13	4	3
History	25	44	37	29	80	32	28	18	20	27
Politics	9	14	8	10	13	9	4	4	5	4
Economics	24	46	17	14	37	20	19	8	21	32
Sociology	14	13	25	19	19	18	32	25	16	12
Law	1	3	4	2	2	4	7	7	9	8
Total :	949	1,053	1,732	1,302	1,562	1,121	1,252 Upto	1,094 Oct. '84.	886	769

AN IDEAL NATIONAL BIBLIOGRAPHY : VIEW OF A SCHOLAR

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Introduction

In this short paper I shall, I am afraid, be speaking very much from my own rather specialised experience as both a researcher and a guide of research in western literature rather than from much experience with regard to Indological subjects. However I do hope that my remarks about the kind of bibliographical aids one needs and already has provided in libraries in different parts of the world will be by analogy of some help to us in setting our sights for improvement of the facilities at the National Library of India.

Early printed Catalogues

If doctoral candidates working in Calcutta seek my advice about the preparation of an accurate bibliography for their theses, I find myself usually advising them to consult the general catalogue of printed books of the British Library, formerly the British Museum Library. For this is most likely to list both the first edition of any book printed in Europe as well as the range of other editions held by the Library, all with fairly full bibliographical information, about date, place of publication, printer and publisher, editor and so forth. And if there is some doubt about whether a full range of editions has been listed, then consultation of the Library of Congress Catalogue of the United States often gives necessary supplementary information. Though the *New Cambridge Bibliography of English Literature* is very wideranging in its entries, covering History, Law, Philosophy, Science, Religion, Education, and so forth, as well as imaginative literature, the bibliographical information it gives is often not good enough or comprehensive enough for footnotes and references in scholarly work. So one is thrown back upon the catalogues of the great major libraries of the world as one's final authority as they should be.

However, there are more specialised kinds of work, for which scholars need even more particular kinds of aid. This is especially true of early printed books. Those published in England from the late 15th.

to the late 17th. century, for example, were studied by the scholars A. W. Pollard and G. R. Redgrave and listed in their *Short-Title Catalogue of Books, 1475-1640*, first published in 1926. Copies of such books in existence may be so rare that it is possible to list all surviving copies according to the libraries where they may be found. This was done both by Pollard and Redgrave, and also by Donald Wing in his *Short-title Catalogue of Books, 1641-1700*, published from New York in 3 volumes between 1945 and 1951; but it has been found necessary to revise and supplement their work since then, and a great programme of micro-filming all these titles is now well under way, so that, in theory at least, it will be possible to study them in microfilm or microfiche anywhere in the world.

India's National Library

Naturally, in considering the tasks of the National Library of India, it must seem desirable that it not only provide a complete updated printed catalogue of its holdings in the Indian languages as well as in Indological subjects and of other books printed and published in India, but sponsor, if not undertake itself, the work of studying all instances of the early printed book in India, and indicating the whereabouts of rare volumes, much as Pollard, Redgrave and Wing have done for early books in Britain. What these scholars did, in effect, was to provide a Union Catalogue, the compilation of which of course required years of laborious and meticulous work. In our computerised age, we perhaps expect quicker results, but I suspect there is really no royal road to the compilation of some kinds of information, at least in its early stages, however much help the computer may provide at latter stages.

Union Catalogues of Indian Resources

In compiling a Union Catalogue of Indian resources a number of problems immediately meet the eye. The first is that smaller, and sometimes not-so-small libraries with limited resources, have woefully imperfect card-indices or catalogues, which need modern revision by staff specially deputed to do this work in particular, which should include inspection on the shelf of all titles. Without such complete information at the local level, it is hardly possible to think in national terms, and I suspect that this is an all-India problem. We also need more university-based or institute-based scholars who will work along with library-staff in familiarising themselves with the contents and state of preservation of libraries, and will often be particularly aware of the importance of some rare volume lying unknown and uncared-for.

Periodical, Newspaper and Pamphlet Collection

Another kind of printed material which often needs a special catalogue to itself is the newspaper or journal or pamphlet collection. One thinks of the British Library's remarkable Thomason Collection, which includes virtually every pamphlet, sermon, speech or related document published in Britain during the Civil War and Commonwealth period of the seventeenth century—a collection due to the scholarly enthusiasm of a particular individual. The National Library of India possesses many pamphlets belonging to the colonial period, often usefully listed under the East India Company heading, and your catalogue of the historical and geographical material in the Asutosh Collection is another excellent tool for tracing valuable material. But from personal experience I have become aware that certain items among your holdings are hard to find on your card-indices, and other essential items are to be found only at the India Office Library or the British Library, but not here. I hope that in future, through exchange of microfilms or photostats, the National Library of India may attempt to enlarge its holdings in this area. It seems anomalous that at present one can only study some aspects of the colonial period in India with completeness by going abroad.

There must be other areas of study where exhaustive printed catalogues and bibliographies are desirable. Some work of this kind is being done. The other day I noticed, for example, that a fine new volume on the rock-cut temples of Elephanta includes what looks like the completest bibliography of works discussing the temples, journals-articles and portions of books as well as books which I have come across as well as a short judicious appraisal of their value. There must be many other areas where similar work can be done—for example, on printed books relating to the natural history of the subcontinent. The wide-ranging collection of such volumes in the Rare Book Room of the National Library, as well as the Asutosh Collection, make this an ideal place for doing such bibliographical study. Again, the development of modern education in India can be charted in official and unofficial publications, especially of the nineteenth century. In this area there is need for more cross-indexing at the National Library, as an 'official' work such as H. S. Sharpe's *Selections from Educational Records* is listed, not under its editor's name, under Government Publications in the annexe, so that a researcher unaware of the publisher, but with only a reference to the editor may be unable to trace it, and indeed may think it is not in the Library. An equally pressing task of the Library must be the microfilming of the brittle volumes of the *Proceedings of the Calcutta School Society* and *School Book Society*.

Manuscript Collection

I have so far said nothing about the listing of manuscript-collections, partly because this is an area in which I am not an expert in relation to India. I am however somewhat familiar with the Manuscript Rooms of the British Library, the India Office Library, the National Library of Scotland and the Scottish Record Office, with the air of sanctity and complete silence which surrounds them, with the meticulous surveillance given by specially trained staff, to make sure that no documents are surreptitiously removed or otherwise mutilated. The person at the surveillance-desk is as often as not, at least in the National Library of Scotland, himself a trained archivist with a research-degree, who knows the collections, not simply as a bibliographer but as a cultural historian. And it is this kind of person who has edited the catalogues, and sometimes written descriptions listing contents and highlighting their importance.

The compilation of catalogues and indices is an ongoing process, it seems to me, rather than a task to be completed once for all. I think, for example, of the notable Sanskrit manuscript collections at the Bodleian Library, Oxford, where I have briefly worked—how in the nineteenth century Aufrecht compiled his laborious descriptions in Latin, but how later Winternitz and Berriedale Keith covered the same ground from other points of view, and in English, so that now one would want to refer to both sets of catalogues to get a full conspectus of the contents and estimate of their importance. We have outlived the age of the great individual bibliographers, perhaps, but it would be a pity if a new generation of scholars and library staff lost a sense of the value of their earlier work, and its exemplary force in the intense love and reverence they bore to the volumes they handled, and the continuing aid they give to modern scholars who are setting out to investigate for themselves.

HOW TO BRIDGE THE GAP IN THE COVERAGE OF THE INDIAN NATIONAL BIBLIOGRAPHY : A PUBLISHER'S VIEWPOINT

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Introduction

The publishing industry is keenly interested in the compilation and circulation of national bibliography since it is an important contributory agent for promoting sale of books in India and abroad. A wide circulation of an updated and comprehensive bibliography is all the more important for a country like ours where distribution of books continues to be the weakest link in the operation of the publishing industry, particularly so when there is a growing hunger for books among vast multitudes of our people as a result of inescapable development of formal and non-formal education inside and outside educational institutions. The requirement for a national bibliography for planning future publications and to meet the long felt needs of the people is also too obvious to deserve detailed emphasis.

Indian National Bibliography

It is, therefore, unfortunate that the publication of annual issues of I. N. B. has been irregular for the last many years and it is all the more regrettable that the monthly issues were discontinued in 1978. The suspended monthly issues of INB resumed publication from 1984.

While the regularity in the publication of the annual and periodical issue of I. N. B. is highly desirable it is equally important to ensure that these issues are as comprehensive as possible. My major concern in this paper is, therefore, to discuss various measures to bridge the gap in the coverage of I. N. B. so that it can be made truly representative of the publishing activity in the country.

Measures to bridge the gaps in the INB

1. The most obvious course available to us in this regard is to insist on strict enforcement of Delivery of Books (Public Libraries) Act whereby each publisher in the country is required to submit four copies each of his publications to a number of public libraries in the country. But we must appreciate that the publishers have their own difficulties in

complying with statutory provisions in this regard. In the first place, quite a few publishers located in smaller towns and distant places are not fully aware of the provisions of the Act. Further, the publishing industry, for quite sometime, has been facing financing difficulties primarily as a result of phenomenal increase in the cost of paper, competition from unauthorised import and sale of obsolete books on technical subjects by unscrupulous merchant traders at throw-away prices, increasing control of government and public-sector agencies over the publication of educational books, etc. The publishers, and particularly the smaller ones among them, find it taxing to supply free of charge a considerable number of generally costly books to a number of public libraries. The high cost of postage further adds to their liability. They are also discouraged by the fact that the authorities concerned have not been able to publish and circulate the annual and periodical issues of the Bibliography on a regular basis, thus defeating the very purpose for which publishers are required to furnish their books. At time, even the receipt of their books is not acknowledged by the National Library, Calcutta. The publishers at times have found, to their dismay, that the publications furnished by them have not been included in the relevant issues of I. N. B. All these are genuine difficulties and, therefore, need to be looked into.

All these are genuine difficulties and, therefore, need to be looked into.

1. While it may not perhaps be possible for the official agencies to buy all publications, even at a substantial discount that the publishers are ready to allow on their books, the government can at least consider favourably the suggestion for decreasing the number of copies of a publication to be supplied by them. The suggestion made for meeting the postal charges by the official agencies receiving the books is highly reasonable and the government should amend the Act to make necessary provision in this regard. The receipt of books furnished by the publishers should, of course, be acknowledged with scrupulous promptness.

2. I believe that the national and regional organizations of publishers can render a valuable help in bridging the gaps in the coverage of I. N. B. through various means. For example, they can apprise their publisher-members of the relevant provision of the "Delivery of Books Act" and impress upon them the advantage of free entry of their publications in the national bibliography. They can also check up for them the entries in I. N. B. issues, relating to their publications and inform them accordingly.

3. International Standard Book Number (I. S. B. N.) has been universally recognised as a modern upto-date procedure for separate identification of each publication brought out by the publishers. The government sometime back had assigned the responsibility for acting as national

agency for implementation of this procedure, to one of its offices, National Educational Resources Centre, in the Ministry of Education. So far as I know, the Centre has not been able to deliver the goods. There are only a few publishing concerns in the country who follow the ISBN system. I would suggest that this important work should be assigned to the Central Reference Library. This, in turn, shall help the library to identify a large number of books not received by the National Library. It would also be helpful if the librarians are advised and encouraged to prefer purchase of books with I. S. B. N.

4. The Central Reference Library can also procure necessary information about the recent and latest publications from a variety of resource materials such as (i) published bibliographies covering various subject-fields, *i.e.* Anthropology, Indological Studies, Archaeology, Scientific Series, etc. and (ii) advertisements about books and "reviews" in the daily and weekly newspapers and various trade journals published by professional organizations and leading publishing houses.

5. The Central Reference Library should preferably prepare a Bibliography of Bibliographies. A bibliography of Indian bibliographies, has recently been published by the Central Reference Library, covering the entries which appeared in the various issues of I. N. B. and a comprehensive list of all publishers. The library should make special efforts to procure from them requisite information about publications, preferably those brought out in Indian languages, since there is justifiable impression that the I. N. B. has much greater gap in the coverage of books in regional languages.

6. It has been suggested in certain quarters that the government, through amendment of Indian Copyright Act, should make registration of a publication with Central Reference Library as a statutory precondition for claiming copyright protection. I personally do not subscribe to such a view since I believe that the author's copyright is his creation and should not be subjected to any restriction of registration, etc. Even otherwise the Government of India would not agree to the suggestion as the provisions of the International Copyright Organization known as Berne Convention (of which India is an active member) do not permit imposition of any formalities as a precondition for claiming copyright in a publication.

7. There is no gainsaying the fact that proper implementation of these suggestions would require specially qualified staff and this would need considerable strengthening of the I.N.B. cell in the Central Reference Library. The government shall have to be persuaded to allocate substantial additional funds to enable the Library to ensure publication of comprehensive issues of I.N.B. with scrupulous regularity.

8. The proposal regarding transfer of Central Reference Library from Calcutta to Delhi has been pending with the government for inordinately long time. It should be implemented without further delay. The location of the library in Delhi shall not only ensure a better coordination and liaison with the controlling ministry in Delhi but shall also facilitate speeding up of compilation of a comprehensive National Bibliography as a large part of the publishing industry in the country is concentrated in Delhi.

9. It would also be helpful if a small committee with adequate representation from the publishing industry is set up to monitor the progress of the preparation and publication of the National Bibliography and help in removing the bottlenecks and resolving the issues that may arise from time to time in implementing this important project.

Finally, I have only made some tentative suggestions for bridging the gaps in the coverage of the I.N.B. and thus making it more comprehensive and useful. I feel that I have just set the ball rolling in the hope that your reactions and the resultant discussions would help in evolving some practical proposals in this regard.

I may, however, take this opportunity to assure you that the publishing community whose cooperation and assistance would be needed in implementing quite a few suggestions, made by me, would be willing to play a positive and constructive role in the matter.

TABLE-1

*Coverage of documents in Indian National Bibliography in English language
by types of publishers*

(Source—January, 1984—April, 1984).

Sample	Govt.	Associations/Learned Bodies/Societies/ Universities, etc.	Commercial	Total
January 1984 issue	150	31	82	263
April 1984 issue	99	67	78	244
	<u>249</u>	<u>98</u>	<u>160</u>	<u>507</u>

TABLE-2

Distribution of documents by commercial publishers in Indian National Bibliography in English language according to the Years

(Source January 1984-April, 1984).

Sample	Years Covered						Total
	1979	1980	1981	1982	1983	1984	
January 1984 issue	2	1	6	27	46	x	82
April, 1984 issue	x	1	4	13	60	x	78
	2	2	10	40	106		160

TABLE-3

Coverage of monographs in the Library of Congress Accession List in English language by type of publishers

(Source : January 1984-April, 1984)

Sample	Govt.	Associations/Learned Bodies/Societies/ Universities, etc.	Commercial	Total
January 1984 issue.	61	112	129	302
April 1984 issue.	70	75	118	263
	131	187	247	565

TABLE-4

Distribution of monographs of commercial publishers in the Library of Congress Accession List in English language by types of publishers

(Source January 1984-April 1984)

Sample	Years Covered						Total
	1979	1980	1981	1982	1983	1984	
January 1984 issue	2	2	2	13	110	—	129
April 1984 issue	—	3	5	17	93	—	118
	2	5	7	30	203	—	247

TABLE-5

Coverage of books by one publisher (Vikas) in Indian National Bibliography and the Library of Congress Accession List

Sample	(In INB)	(In Accession List)
	No. of books	No. of books.
January 1984 issue . . .	6	6
April 1984 issue . . .	8	2
	14	8

TABLE-6

The following table indicates the book production figures for the year 1981-82

Language Publications	Number of Titles
Assamese	193
Bengali	1,025
English	6,983
Gujarati	677
Hindi	2556
Kannada	502
Malayalam	913
Marathi	1,138
Oriya	248
Panjabi	325
Sanskrit	104
Tamil	1,315
Telugu	392
Urdu	388
Other languages	39
	16,798

ISBN AND INDIAN NATIONAL BIBLIOGRAPHY : THE ROLE OF NATIONAL EDUCATIONAL RESOURCES CENTRE

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Introduction

With the rapid explosion of the vast gamut of human knowledge both in the developed and in the developing countries, there heralded an era of uninterrupted flow of published books. Obviously, libraries have lately mushroomed and the need for augmenting storage, retrieval and dissemination of vast published materials on Scientific lines are felt. The published resources were marshalled in the direction of their systematic Bibliographical control. This facilitated to the origin and growth of universal and subject bibliographies both in India and abroad.

Book Situation in India¹ :

Book publishing in India has come a long way after independence. Today, India is among the first ten largest book producing countries in the world and ranks third, after the U.S.A. and the U.K., in production of English titles. According to Unesco Statistical year Book 16,446 titles were published in India in 1980 out of which 7512 were in English. To promote the production of good quality books at reasonable prices, encourage authorship, help the Indian book industry in the solution of its problems, formulate book import policy and promote book exports a special Book Promotion and Copyright Division functions in the Ministry of Education & Culture. Today the book industry in India is a large complex consisting of a wide range of professionals like authors, publishers, distributors, printers and booksellers. All these different interests are represented in National Book Development Council which has been set up and entrusted with wide ranging functions to lay down guidelines for the development of the book industry in the context of the overall requirements of the country.

Rapid strides have been made in the fields of publishing during the last decade. According to a rough estimate, there are at present about 20,000 publishers in the country who among themselves publish about 35,000 titles every year in various languages. The official figures regarding the number published by UNESCO is incomplete and not up to date. According to the Delivery of Books Act (1954) each publisher is supposed to send one copy of titles published as compiled by our National Library, Calcutta and as of the publications to the National Library, Calcutta and maintain the statistics relating to the production of books. Many publishers in fact do not send copies of their books to this library and as a result the number of titles as reported to be published during a particular year is much less than the actual number of titles published. UNESCO has recently desired that member countries should collect detailed information relating to the statistics of book production in the country, in a prescribed proforma. This matter was recently discussed in a Working Group set up by this Ministry to consider the development of Book Industry during the Seventh Five Year Plan and it has been recommended by that Working Group to make it compulsory for individuals and publishers to get their books registered by the National Agency before they can be circulated for distribution. To avoid duplication of effort we are considering the possibilities of making it obligatory for each publisher to have an ISBN for each book published. For this purpose we may have to frame a new act of Parliament.

Since English was the official language as well as the medium of instruction at the University level under the British rule, the development of modern Indian language obviously suffered rude shock until 1947 when India achieved independence. Today about 15,000 titles are being published in 15 regional languages (against 7,500 titles in English). A library can acquire about 10,000 new titles in modern languages each year and 5,000 titles in English. Unfortunately, titles in the modern Indian Languages are not comparable favourably with the English language titles so far as their subject coverage is concerned.

(a) Import and Export of Books :

Needless to add, India continues to depend upon the U.S. and the British books on higher education and research, and the import works out to Rs. 200 million of books and journals annually. The import of books is facilitated by the fact that India does not impose any restriction on the import of books nor does it levy any import duty or sales tax (value added tax) on them. In fact, publishers are given a rebate on income tax by way of incentives. Keeping in view the recommendations made by the World Congress of Books, all efforts are being made to make books easily available. To promote the reading habits, India organises a World Book Fair on after-

nate years and also participates in various International Book Fairs through the National Book Trust. Special exhibitions of Indian books are being organised in the various parts of the world. As a result thereof exports of Indian books have picked up from the level of about Rs. 15 million in 1972-73 to over 205 millions during 1983-84.

The published materials are thus made accessible to the potential users through the Bibliographical data. India, being a vast country and linguistically and culturally diverse in nature, is playing a pioneering role in achieving a Bibliographical Control over all the abundant crop of published materials. To what extent it has been successful in achieving its goal in regard to bibliographical comprehensiveness, updateness etc. is a massive question of far reaching dimensions.

(b) *Future Trends :*

India has a population of 687 millions. It has 22 states and 9 union territories. There are 22 recognised languages and many dialects. It has 134 universities deemed to be university with 4,500 affiliated colleges, about 450 engineering and technical institutions. The number of enrolled students in schools at present is about 120 million and in colleges and other institutes of higher learning about 5 million. The Government is taking urgent steps for universalisation of elementary education and adult literacy programme has been given a very important place in the seventh Five Year Plan. Public Library System is going to be strengthened considerably. Many new schemes for the production of books for various categories of readers through autonomous bodies like NBT, Indian Council of Agricultural Research, Indian Council of Historical Research, Sahitya Akademi, National Council of Educational Research and Training etc. have been launched. The Central Government and the State Governments propose to provide sufficient funds in their budgets for the promotion of books. Even at present there are about 80,000 Libraries in the country and the bibliographical control is being managed through the data base computer system in a few technical university libraries and other higher institutions.

(c) *Printing Facility :*

Corresponding infrastructure for the production of books is being provided. For a long time in India printing industry was neglected. After Independence there was a shortage of foreign exchange and imports of printing machinery were allowed mostly from rupee trading areas, i.e., East Germany and the Soviet Union. But since 1978, imports have been liberalised and the printing industry is being rapidly modernised. In 1974-75 the imports of machinery was merely worth about 0.1 million dollars, in 1982-83 it reached 50 million dollars. There are over 60,000 printing establishments

all over the country. According to the last survey (1977) the annual turnover of the printing industry was over 1 billion dollars.

Need for Bibliographical Control :

Bibliographical control represents the mastery over the written and the published records which are provided by and for the purpose of bibliography. Bibliographical Control is synonymous with effective access through bibliographies. Bibliographic Control means the adequate listing of record of knowledge in all forms, including published as well as unpublished documents. If there is any satisfactory bibliographic organisation of recorded knowledge, it will automatically aim at the systematic bibliographical control. The Central problem of bibliographic organisation is to systematise these endless resources available to us by comprehensively listing them for making its most effective use in the diversified fields of knowledge. The problem is as old as books themselves. Our libraries are familiar with it and have gone a long way towards providing the students and scholar with the material they need. For the first time in the history of this country an authentic and accurate record of current publications in all Indian Languages including English has been published in the form of the Indian National Bibliography. This quarterly publication takes note of the all State and Central Government publications. The National Library at Calcutta has prepared a plan and completed all arrangements to bring out a series of bibliographies on Indological subjects. The Sahitya Akademi published a retrospective Bibliography of selected writing of Indian authors published during 1901-1953. Similarly in the field of Science INSDOC, in the field of Social Science ICSSR are really doing a commendable work in the direction of abstracting, indexing and bibliographical work. All their efforts require coordination and they lead to a suitable nucleus for establishing a proper organisation to secure effective bibliographical control of printed materials available in India. Needless to add, the UNESCO has taken keen interest and strenuously endeavoured in tackling the problems of diversified nature at an international scale. UNESCO has published several bibliographies and has organized a well co-ordinated bibliographical services. Mention may be made of the UNESCO bibliographical handbooks and the International Bibliographies of Political Science, Economics, Sociology and Social and Cultural Anthropology. Bibliographical Control at Institutional, regional and national levels, indicating the subject priorities, methods and financial implications for new Bibliographical projects, improvements of current continuing progress and their coordination alongwith the details of the *modus operandi*, the name of specialists, institutions or Associations competent and willing to cooperate in the execution of such schemes, etc., has been very systematically streamlined by the UNESCO.

Historical Background :

Genesis of International Book Numbering :

Numbering systems for books have been used by the publishers long ago for house-keeping use in non-standardized ways with a continuing proliferation of titles. During 60's computers were beginning to be used in the book trade for order processing and inventory (booksellers, publishers, printers and libraries) could benefit from standardized numbering system.

The question of the need and feasibility of International Book Numbering System was first discussed at the third International Conference on Book Market Research and Rationalization in the Book Trade held in November, 1966 in Berlin. The system which fulfilled this requirement and became known as the International Standard Book Numbering System (ISBN), was developed out of the Book Numbering System introduced into the United Kingdom in 1967. At the same time the Technical Committee Documentation of International Standard Organization (ISO/TC 46) set up a working group to investigate the possibility of adapting the British system for international use. The Documentation Committee (TC 46) of the International Organisation for Standardisation (ISO) considered a number of systems followed by various countries in addition to British system and after a long deliberation decided to co-ordinate and standardize the use of code numbers of British system for books and have published an International Standard 2108-1972.

The International Standard Book Number (ISBN) is based on International Standard ISO 2108-1972. The purpose of ISO-2108 is to coordinate and standardize internationally the use of book numbers so that an ISBN identifies one title or edition of a title, from one specific publisher and is unique to that title or edition. The Standard Book Number (SBN) is a unique number given to a book from one specific publisher to identify its publishers, the individual title or volume of a multi-volume work and is unique to that title or edition or volume. The SBN consists of four parts, namely : group identifier, publisher identifier, title identifier and check digit.. The ISBN applies in the main two books for which the system was originally created but by extension, it may be used for many items produced by publishers or collected by libraries.

International Book Numbering Agency (Berlin) :

International administration of the ISBN System is in the hands of the international ISBN Agency, which has an advisory panel representing the International Standard Organisation, publishing, bookselling and Library

world. Since 1972 it is located within Staatsbibliothek Preussischer Kulturbesitz in Berlin, to achieve the following objectives :

1. To approve the definition and structure of groups ;
2. To allocate identifiers to groups (Registration Authority) ;
3. To advise groups on the setting up and functioning of groups agencies ;
4. To advise group agencies on the allocation of publishers identifiers ;
5. To promote generally the worldwide use of the system ; and
6. To supervise the use of the system.

In addition, the International Agency also offers the following services
It will

- Provide a group agency with lists of ISBN (with computer generated Check digits) for the use of publishers in the group.
- Provide international registers of publishers' identifiers and publishers names.
- Provide from information supplied by groups agencies, a computer print-out of lists of publisher identifiers, names and locations.
- Provide from information supplied by group agencies, a computer print-out of invalid or duplicate ISBN.

What is ISBN ?

ISBN is a unique number given to a book by one specific publisher to identify its publisher, the individual title, or a volume, of a multi-volume work and is unique to that title or edition or volume. The Standard Book Number consists of 10 digits and will be in four parts *viz.*, group identifier, publisher identifier, title and check digit. The group identifier is allocated by the International Standard Book Numbering Agency, Berlin. Group number 81 has been allocated to India. The publisher identifier will be assigned by this Centre, and the number of digits representing a publisher will vary depending upon the output of titles of the concerned publisher. Similarly, title identifier for the individual title will be allocated by publisher from the list of ready-made numbers supplied by this centre. The fourth part which is 10th digit will be check digit. This number is computed as a result of an elaborate calculation on other nine digits.

Scope of ISBN :

For the purpose of ISBN System books and other items to be numbered include :—

Printed books and pamphlets.

Micro-form publications.

Braille Publications.

Mixed media publications.

Machine-readable tapes designed to produce readable print-out.

Other similar media including educational films and transparencies.

How to Calculate Check Digits :

In this system the tenth digit is the check digit which is calculated on a modulus 11 with weights 10-2 using X in lieu of 10 where occurs as a check digit. The procedure for calculating check digit is as under :

	Group	Publisher	Title Number
1. Write the digits of the basic number	81	200	0001
2. Write the constant weights associated with each position of the basic book number	109	876	5432
3. Multiply each digit by its weight	809	1600	0002
4. Add the result of the multiplications	$80 + 9 + 16 + 2 = 107$		
5. Divide the sum by modulus 11 find the remainder	$107 - 11 \text{ of } 8 = 9 \text{ plus a remainder}$		
6. Subtract the remainder from the modulus 11 to find the required digit	$11 - 8 = 3$		
7. Append the check digit to make the Standard ten digit ISBN	81	200	0001

Need and Benefits of ISBN

Considering the advantages of ISBN system it was decided to introduce the system in India for giving impetus to the Indian Book Trade. The usefulness of the ISBN system had been amply demonstrated since already more than forty countries are using it and more are on the way of adopting the system. For the librarians, the immediate advantage is in the simplification of ordering work. For the booksellers, it offers a scheme for arranging the stock for easy and an efficient supply of items. For the publishers, it provides a basis for involving an efficient procedure for stock control, order fulfilment, book keeping and sales analysis.

The ordering system in book trade is dependent on the fact that ISBN is available in all references, that is, in advertising brochures, publishing house catalogues, book trade registers, in books, receipts, order, bills, etc. ISBN, therefore, serves as a register number or additional identification of the issue, edition, type of cover, etc. Thus, it gives more information than the title statement. ISBN replaces the order number, delivery number, etc., which are frequently used in manual system. It has the advantage that the number given in a book is equally known to all persons concerned, the people ordering as well as those supplying, libraries, booksellers and publishers. ISBN is also useful in compiling the inventory stock. In publishing houses and the book trade where computer supported systems are in operation, ISBN has the greatest use.

ISBN has also been designed for International usage. In view of the steady increase of multinational publications, the international availability of books, inter library lending and international bibliographic information exchange, it seems important that this system should be adopted by the main publishing countries. In brief, ISBN provides a unique identification number for each book published, distinction, such as different bindings, editions, publishers, etc., are written into the number. The ISBN provides a way for all parties-publishers, wholesaler, retailer library and patrons to communicate with each other about a specific book in an un-ambiguous manner without the burden of using a complex bibliographic citation.

Book publishing selling and library operations would be greatly simplified and the Indian book industry would stand to benefit a lot by aligning itself with the ISBN system.

The success of ISBN system depends on an understanding and effective use of it. The ISBN system provides a unique identification number for each book published. Distinctions, such as different bindings, edition,

publisher, etc., are written into the number. In general, the ISBN provides a way for all parties—publishers, wholesalers, retailers, libraries and patrons—to communicate with each other about a specific book in an unambiguous manner without the burden of using a complex bibliographical citation. Some of the merits of the ISBN System can be stated as below :—

- A. The ISBN speeds Deliveries as the large majority of publishers and whole-salers are using the ISBN as an order control device. The entire process of book fulfilment is expedited.
- B. The use of ISBN reduces errors in book ordering because the ISBN simply and uniquely identifies what is wanted. The ISBN has a Check Digit and will only work in a computer if the number is valid one
- C. Foreign Book ordering will be simplified, which is badly needed by our leading publishers exporting books abroad
- D. ISBN System has been designed to help publishers, whole-salers, book-sellers, libraries and documentation Centres. While it is especially for computer processing, it can also assist in conventional operations.
- F. ISBN is an efficient and economic communication link throughout the world, brought under a unified system of business relationship.
- G. ISBN is a means for coordination and familiarization of personnels involved with book publishing activities or the book trade from all fronts *e g* , at International, National and local levels.
- H. ISBN facilitates the use of computer inventory and unique number for rapid exchange of information among people and agencies involved in the book trade.
- I. A means of checking malpractices by avoiding verbatim copying of titles, authors and other bibliographical data.
- J. An effective means of keeping a register of publishers in a country.

ISBN System in India :

In view of the need for assigning book numbers for Indian book industry which is growing rapidly, Indian Standard Institution, Manak Bhavan, New Delhi, took the initiative and set up a Documentation Sectional Committee (EC2) to consider the feasibility of joining the International Standard Book Numbering Agency in Berlin. Indian Standard Institution, after considerable deliberation, and taking into account the views of several agencies concerned, including Librarians and publishers

have published an Indian Standard Guide for Standard Book Numbering (IS—8310—1977) to link India with the International trend in the system of book numbering in India. This practice has been found useful for recording information in publisher's accounting, data storage and warehousing operations as well as for ordering and stock control purposes in bookselling and Library environments. ISBN is used extensively by book trade bibliography compilers.

NERC : A National Book Numbering Agency :

Raja Rammohun Roy National Educational Resources Centre, an integral part of the Ministry of Education & Culture (now National Agency to operate ISBN in India) was established in 1972 as an extension of book promotional activities of the Book Promotion Division of the Ministry. It functions primarily as a data bank for the indigenous book trade. It is a Research-cum-Information Centre and promotes writing at University Level in English, Hindi and all other regional languages and endeavours to see a prosperous and developed National Book Industry through its multifarious activities. Most of its sister Book Industries in the West have become computer-based and using 'ISBN' system in their day-to-day work and have, thus increased efficiency in their services and enhancing their exports. The Ministry of Education and Culture after a long deliberation and to give more impetus to National Book Industry, designated Raja Rammohun Roy National Educational Resources Centre as the National Agency to operate International Standard Book Numbering system (ISBN) in India.

Administering of the ISBN System in India :

To assist and co-ordinate the International Agency, this Centre, "Raja Rammohun Roy National Educational Resources Centre" New Delhi, has since been designated as National Standard Book Numbering Agency in India in February, 1977 to operate ISBN System with the following objectives :—

1. To manage and administer the affairs of the group.
2. To handle relations with the International ISBN Agency on behalf of all the publishers in the group.
3. To decide, in consultation with trade organisations and publishers, the publishers identifier ranges required.
4. To allocate publisher identifiers to publishers eligible to join the group and to maintain a register of publishers and their publisher identifiers.

5. To decide, in consultation with trade organisations and publishers, which publisher shall assign numbers to their own titles and which publisher shall have numbers assigned to their titles by the group agency.
6. To provide a technical advice and assistance to the publishers and to ensure that standards and approved procedures are observed in the group.
7. To make available a manual of instructions for publishers.
8. To make available computer print-outs of ISBN to the publishers numbering their own books with check digits already calculated. (Such print-outs may be obtained from the International Agency on request).
9. To inform publishers of an invalid or duplicate ISBN assigned by them.
10. To validate all ISBN assigned by publishers numbering their own books and keep a register of them.
11. To assign numbers to all publications from those publishers who do not assign their own ISBN and advise the publishers concerned of ISBN assigned upon request.
12. To achieve, thereby total numbering in the group.
13. To arrange with book listing and bibliographic agencies for the publication of ISBN with the titles to which they refer.
14. To arrange with publishers for the numbering of their back lists and for the publication of these in appropriate trade bibliographies.
15. To maintain liaison with all elements of the book trade and introduce new publishers to the system.
16. To assist the trade in the use of the ISBN in computer systems.

How to obtain Publishers' Identifiers :

Each publisher in India will approach this Centre for the allotment of a publishers' identifier in accordance with a well defined procedures as laid down in the Centre's ISBN Manual.

Monitoring the Proper Use by the Publishers :

The National Agency will monitor the ISBN system in the country with the close collaboration of the National Library and Book Promotion Division of the Ministry of Education. The successful operation of the system could only be possible if it is made to be mandatory on the part of publishers instead of optional in nature. The system will be operated and

then after coordinating a preliminary survey regarding as to what extent the publishers are actually responding favourably in making a system success in the country, it would be possible to formulate a second stage of "taking off" of this scheme. Without suitable modification in the existing Book Delivery Act, it would not be possible to give a momentum to the ISBN system in the country. Presently under the existing circumstances, the National Agency will have to look forward for its dependence on the National Library for checking the receipt of titles which are given ISBN number by the National Agency. This will obviously delay the matter and may evoke to evolve an other cross-checking device in future. It would be desirable to make the National Agency a repository of ISBN collections under the Delivery of Books Act, for speeding up the work and precision in operation of the system. The National Agency will publish a National Catalogue of such ISBN collections confirming to the existing International Standards of the International Agency and circulate them to the Publishers and other users.

Indian ISBN Manual contains necessary instructions about the printing and display of standard book numbers for the information and guidance of the publishers. In addition to the Manual, every publisher participating in the scheme will be provided with (i) Log Book and (ii) a set of ISBNs with computerised check digits, National Agency will allocate sets of ISBN numbers to publishers and they would be expected to number their own books. As most of our publishers do not use the computer, therefore, computer print-outs with check digits calculated will be provided to them.

The use of the system will be monitored in the following ways :

1. As already stated, publishers will be provided with sets of ISBNs with computerized check digit. Publishers would be required to intimate the National Agency as and when any number from the list is utilized, alongwith the particulars of the book to which the said number assigned.
2. Publishers would be asked to forward a list of their publications including the ISBNs assigned to them, to the National Agency every three month. Through such lists the Agency will be able to see how the numbering is carried out and detect numbers assigned incorrectly, if any. Where invalid number detected the relevant publisher would be asked to cancel their number and assign new one.
3. Check will be kept on the publishers catalogues.
4. National Library receives the books under the Delivery of Books Act. Liaison through correspondence or personal visits will be

maintained to find out the proper use of the system by the publishers.

It may be recalled here that National Educational Resources Centre was set up by the Ministry of Education and Social Welfare, in 1972 as a nucleus for Research-cum-Information Centre for the publishing industry. This Centre also maintains a Text-book Reference Library for the use of authors, publishers, Institutions, etc., to enable them to survey the availability of books in different fields and for planning fresh publications. Authors and publishers, both in the public and private sectors, are welcome to make use of the facilities being offered by this Centre.

International Catalogue of ISBN :

Publishers would be requested to provide the National Agency with the computer data based advance book information proforma (ABIP) compiling the details of the books to which they intend to allocate ISBN numbers three months. Besides, ISBN, the information will pertain to author, titles, year, pages, place of publication, volume, edition, etc.

The ABIP will be verified with the record available with the National Agency and then processed with a view to bring out a National Catalogue of ISBN for India every quarterly. The ABIP is finalised by taking into consideration all possible information as per UNESCO Statistical Year Book.

National Agency will then bring out the list of all the ISBNs used in the quarter. This list will be ISBN wise and alphabetically by author.

Computer Terminal and Data Base Repository Centre (D. R. C.):

The gigantic task of the implementation of ISBN in India would only be possible if the computer data based terminal is established in the Centre. This dream of today will be a reality of tomorrow. The efforts are going on and the Centre has finalised the Advance Book Information Proforma (ABIP) keeping in view, of computer pace-settings and the anticipated information data based system useful to the publishers, scholars and Ministry of Education. All those publishers who are participating in the Ministry of Education programme of the implementation of ISBN System in India will have to send to the Centre the details of the titles in the ABIP. The information collected in the ABIP can be utilised in various combinations and permutations best suiting to the actual requirements and the Centre would be in a position to render all kinds of feeding informations about forthcoming and published titles to all those organizations who need them. The materials of ABIP will be processed with a view to bring out a "Indian National Bibliography of ISBN" every quarterly.

The record of the books and the relevant ISBN which have been assigned to the Indian Publishers will be maintained in the DRC on following manner.

1. ISBN wise.
2. Publishers wise.
3. Author wise.
4. Title wise.

A Register of the Publishers with their Publishers Identifiers will be maintained in the Centre and they will be sent to International Agency (Berlin) for their inclusion in the "International ISBN Publishers Directory" brought out by the International Agency time to time.

How to identify gaps in INB :

It had always been a very difficult job to achieve a bibliographical comprehensiveness as India is a very vast country. It is not an easy job to find what has been published in the country. All books published in India were not being received in the National Library even though the Delivery of Books Act was in force since 1954. Under this Act only 50% to 60% material published in India is being received, thus leaving a gap of about 40% to 50% in the coverage of the Indian National Bibliography. We have now to find out the ways to identify the gaps in the Indian National Bibliography.

Dr. J. S. Sharma¹ in his illuminating paper "Bib. Organisation and Control in India" has explicitly pointed out in detail the methodology to be adopted in identifying the gaps in INB as well as measures for bringing out comprehension and updateness in them. He referred to the tools like Bibliographies of all kinds, Catalogues, Book Trade Periodicals, Book Reviews, Union List of Serials.

Measures for reducing the gaps in INB : The Role of NERC

Book Industry had been pressing the Ministry of Education for the early introduction of the ISBN system since the publishers are losing sales of their books in the foreign market. Due to their tremendous response, the International Standard Book Numbering (ISBN) system has since been introduced in India. Raja Rammohun Roy National Educational Resources Centre has been designated as the National Agency for the operation of this system in India. India has also joined as 25th nation in the world of ISBN users. Many publishers of Delhi have already been allocated Publishers' Identifiers and provided with list of ISBNs with computerized check digits. Publishers of other states are likely to be assigned identifiers soon.

Though this system is at present obligatory for the publishers to join it, and perhaps this is in their own interest to come forward to join the scheme, yet the Ministry of Education is actively considering a proposal of modifying one of the following acts with an objective to make it compulsory for publishers to obtain ISBN for the books they had so far published, for the books presently or likely to be published.

1. Press and Registration Act, 1867.
2. Copyright Act.
3. Delivery of Books Act, 1954.

Even printing presses may be covered under the proposal amendment wherein they would be directed specifically for not printing any book without an ISBN. A committee is being formed under the chairmanship of the Secretary, Ministry of Education for gearing up this significant proposed legislature modification. Since the report in this direction is yet to be finalised and thereafter it will have to obtain the concurrence of the Parliament, there is, therefore, every reason to believe that the Book Promotion Division of the Ministry of Education is seriously concerned in the effective implementation of ISBN in the Country. NERC have finalised an Advance Book ISBN cards which are being sent to us for verifying the use of ISBN numbers. A Manual issued by the NERC, has been given a vast circulation in the entire country. The use of mass media for the publicity of ISBN is under process at the Centre.

(A) Joint Collaborative Programmes

The National Agency for the implementation of ISBN is Raja Ram-mohau Roy National Educational Resources Centre (Ministry of Education) and the Central Reference Library can collaborate together in such a way that the huge gaps in the coverage of the Indian National Bibliography be substantially reduced. NERC can also feed the Central Reference Library in this direction.

Under this ISBN system, publishers are provided with lists of ISBNs. Publishers are required to intimate us as and when any number from the list of ISBNs provided to them is utilized alongwith the particulars of the book to which the said number is assigned to this Centre. The National Agency after registering the particulars of the book confirms the correctness of the ISBN which can then be printed on that book. Thus National Agency will be having almost complete information of the forth-coming books. Central Reference Library responsible for the publication of the Indian National Bibliography can be kept informed about the forthcoming titles which are going to be published. This intimation can be passed on to the Central Reference Library either book-wise or monthly/quarterly lists of books.

Matters can be discussed by the officials of both the organization and there can be better understanding in order to have comprehensive coverage in the Indian National Bibliography. The Information and Documentation Oriented Projects on collaboration basis may also be worked out since NERC is already bringing out such useful projects.

(B) *Subject Bibliography*

Subject bibliography is undoubtedly the most difficult of all branches of bibliography. Even in such advanced countries like the United States it forms the weakest link in the chain of bibliographical control. At the same time it is very important from the point of view of the scholar and the researcher and, therefore, should be provided for. Luckily we have in several fields comprehensive bibliographies, indices, abstracting journals etc., published in other countries and by the UNESCO. Our need therefore, in this field, is to compile bibliographies only on such subjects which are special to this country. These occur mostly in the fields of Natural Sciences, Humanities and Social Studies. Some time it may also be necessary to have a deep level analysis in certain fields to satisfy the needs of smaller subject area specialists. In such cases special types of bibliographies may have to be compiled.

(C) *Photographic Reproduction*

It is one of the most important modern techniques which supplements the printed book and thus increases the resources of libraries. It provides a method by which we can acquire material which it may not be possible to get from other sources. This is particularly necessary in our country in order to acquire Indian Publications, rare and out of print, and found in other libraries of the world. At present we have only one institution, the INSDOC, which does this service and even this institution is not getting proper support from libraries. It is necessary to support and develop this Centre for photo-reproduction purposes.

(D) *Acquisition of Materials*

The systematic acquisition of library materials by libraries and other depositories in the country is another vital point that we should consider in any scheme of bibliographical organization and control in the country. This means that we should have in our libraries a copy of every publication—both domestic and foreign—of interest to the scholar and the researcher. As far as domestic publications are concerned the different types of libraries in the country cover the bulk of these publications. In the foreign field, however, the position is not satisfactory. In our present academic set up the demand for publication of foreign origin, both for curricular and

research needs, is very large. It is futile and unwise for individual libraries to think of acquiring every publication it needs all by itself. Unfortunately this has been our tradition. We have to change our methods if we are to keep pace with the rising tide in the production of books and serials and the unlimited demands for library materials. Here our watchword should be 'co-operation' at all levels—of acquisition, conservation and distribution of library materials. At this point we have to make a distinction between materials which are in constant demand and less used materials. Materials which are in constant demand must be provided for at all costs. But in the case of less used materials of research value we can develop co-operative plans of acquisition. We cannot possibly think of an Indian Farmington Plan. That would be utopian. But we can certainly evolve plans smaller in scope and less expensive. These plans may be developed on a zonal basis. University and Research Libraries in different zones may enter into agreements by which one library specializes in the acquisition of materials in particular fields and agree to lend such materials to other libraries and *vice versa*. Thus by these co-operative programmes we will have in the country at least one copy of each books of research value published in other countries in the various fields of knowledge. These books naturally get listed in the National Union Catalogue and can be made available even to libraries outside the co-operative zone by inter-library loan or by photographic reproduction

NERC & N L as National Bibliographical & Documentation Centre :
[N. B. D. C]

In order to build up and maintain the various patterns of Bibliographical Organization and Control indicated above, we should have a National Bibliographical Centre. The National Library of India in Calcutta and NERC in Delhi should be considered as two major NBDC in the country.

There should be a Planning Board to advise the Bibliographical Centre. It should consist of Librarians, Bibliographers, subject specialists, representatives of the Union Government, the Indian Library Association and the Book Trade. The Librarian of the National Library should be its Chairman.

Legislative Modification

1. The punitive clauses of the Delivery of Books Act, 1954 need be reviewed and if it is found that there are hurdles in the ways of enforcing the punitive clauses, the Act should be repealed forthwith so that the National Library could buy books from the market as is the practice with the Library of Congress Office in India.

2. Under the Delivery of Books Act, the publishers are required to send copies of their publication at their own expenses. Ministry of Education should persuade the Posts and Telegraphs Department to allow publishers to send material under the law to the Library free of cost.
3. The concept of legal deposit should be linked with Copyright Act as it is being done in various countries to provide a solid base for national bibliography and if this is not possible then law may be amended in such a manner as to make it possible for punitive action being taken for non-compliance with the law.
4. Ministry of Education is considering a proposal to modify one of the following acts in order to make it mandatory for each publisher to obtain ISBN for the books published by him.
 1. Press & Registration Act, 1867.
 2. Delivery of Books Act, 1954.
 3. Copyright Act.
 ISBN is now already in operation in India.
5. National Library should seek institutional membership of the learned societies and acquire publications of those societies at concessional rates.

Budgetary Improvements :

More than Rs. 2 lakhs per annum are being spent by the National Library by way of staff salaries alone in acquiring and cataloguing of the material received under the Delivery of Books Act, 1954, a good percentage of which is doubtful utility. The amount of postage spent in acknowledging the receipt of publications by registered post runs into several thousands of rupees. But if the materials were purchased the library would buy only the material which is of research and information value. This will also reduce the expenditure being spent on acquiring, processing and storing material of doubtful utility. The postage relief may be given to publishers who sent their publication to the National Library.

Computer Automation in Bibliographical Control :

With the advent of computerisation in India a large number of publishers are likely to specialise in computer software. According to the computer Directory of India, 1983, a Con Con Publication, 164 institutions have facilities for teaching in the various aspects of computerisation. It will be seen from the information given in the Appendix I that large number of institutions are providing facilities for degree courses in computer sciences. As per information published in the said directory 295 firms

are providing software consultancy and data processing services. Obviously, a large number of publishers would have to specialise in the production of computer software.

According to Girja Kumar and Krishna Kumar¹ the following important developments have taken place in the field of bibliography :

"The application of computers for handling bibliographic work holds new and diverse possibilities in terms of coverage, arrangement promptness, consistency, accuracy and accessibility. It now becomes possible to manipulate unit records so as to compile a bibliography which, in terms of its scope, can take care of a requirement combination of characteristics and also provide access of desired kinds".

"Computerized bibliographical services usually consist of individual based bibliographical services (a bibliography on demand or in anticipation on a specific subject to meet the requirements of a specific individual or group of known individuals) or generally directed bibliographical service".

"Systems of computer based Selective Dissemination of Information (SDI) for individuals have been developed in many fields especially physics, chemistry, electronics, engineering and nuclear science".

Conclusion :

There is no doubt that big gaps are existing in the volumes of the Indian National Bibliography and every endeavour must be made to achieve comprehensiveness and updateness. It is indeed the clarion call of day to amend the law of legal deposits so as to enable the National Library to get the entire published materials in the country, under one roof and thereafter it may be made capable in bringing out INB regularly. The introduction of ISBN by the NERC can definitely contribute substantially to the National Library in augmenting its plans and policies effectively by bringing out either a Union Catalogue, Subject Bibliography or INB on more comprehensive lines.

Last but not the least, it also hoped that the application of certain new devices like system approach to design and retrieval of information,⁵ mechanisation of Cycle Indexing⁶; Feature Card Indexing⁷ Computer automation in bibliographical control and Select Bessimental Information⁸ (SBI) will also go a long way in the implementation of effective bibliographical control in India. With the implementation of ISBN by the NERC a new vista is opened up in the direction of embarking a joint collaboration Programmes which may best suit to an early compilation on INB with full comprehensiveness and updateness.

Acknowledgement :

The author is beholden with deep gratitude towards the National Library, Calcutta for inviting the NERC, New Delhi to contribute a paper on Bibliographical Control in India to be held on 25-26 Feb., 1985. The author is also grateful to Dr. (Miss) Kala Thairani, Dy. Educational Advisor, Book Promotion Division, Ministry of Education for according permission for the presentation of the paper in the National Seminar.

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NATIONAL BIBLIOGRAPHY : A PROSPECTIVE & RETROSPECTIVE VIEW

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Origin of the National Bibliography

The precursor of the concept of the National bibliography was the concept of universal bibliography, though it may appear strange. As early as 1548 Konrad Gesner conceived the idea of a universal bibliography despite its hopeless realisation. Some of the illustrious followers of this 'father of bibliography' in France and Italy in subsequent countries failed to achieve the goal. The establishment of the Institute International de bibliographie of Brussels in 1895 took up the work of universal bibliography which it abandoned after world war I, despite its partial success. UNESCO's efforts in realising this through National bibliographies is gaining in support from a number of member countries.

In the sphere of national bibliographies the name of antiquarian John Leland has to be remembered. His work 'Commentarii de Scriptoribus Britannicis' published in 1546 was perhaps the first National Bibliography of Britain. National bibliographies of many countries, particularly European, have become somewhat comprehensive, though bibliographical information are not available in a single source of publication. The concept of the National Library as the permanent depository of all the publications of the nation assumed importance in this context.

Indian scene

In India many categories of national bibliographies exist. Indian National Bibliography, Accession list India, Monthly list of government publications, bibliography of doctoral dissertations in all disciplines, Indian Science Abstract, retrospective bibliographies are some of these which deserve being noticed. The Indian National Bibliography in its 27 years of existence published quarterlies and then monthlies, annual cumulations and language fascicules in some languages.

INB and its working

One criticism that has to be levelled against INB is late appearance due to various reasons, among which non and late submission of books and materials and inability as the part of National Bibliography for effective enforcement of the act are important. Accession list India of the

Library of Congress appears to be more comprehensive and lively. Sahitya Akademi's National Bibliography of Indian Literature (1901-53) is a notable bibliographical venture.

The problems relating to the Indian National Bibliography are as follows :

- (a) Non and late submission of publications,
- (b) Inadequacy in the staffing pattern in the bibliographical wing of the National Library,
- (c) Lack of wide advertisement of 'Delivery of Books & Periodicals Act, 1956',
- (d) Ignorance of the act on the part of new publishers,
- (e) Absence of state acts of a similar nature,
- (f) Want of proper survey for tracking retrospective materials in order to bridge the missing gap.
- (g) Want of modern outlook to make use of latest library technology.

Suggestions

In order to overcome these difficulties the following steps are suggested --

- (1) There should be delivery of books and periodicals act for every State.

An officer equal to the Cadre of Class I services in the respective State should be assigned duties and responsibility to prepare a State list of books and periodicals with bibliographical informations.

He should have the power to inspect various publishers (new and old) to ascertain the adherence to the act

- (2) Bibliographical divisions of the National Library should be provided with adequate professional staff to avoid delay in publication.

- (3) The National Library should maintain a list of old and new publishers of the nation and time to time inform them about the submission of new titles, if any. Name and address of new publishers should be collected through the respective States

- (4) Authorities of Central purchase either under Raja Rammohun Roy Library Foundation Scheme or Directorate of Public Instruction should be informed not to select those titles which have not been submitted to the National Library and State Central Library as per act.

- (5) In order to fill up the missing gap the professional staff should go to different places to collect information.

- (6) Delivery of Books Act has to be amended to suit to present requirements.

BIBLIOGRAPHIC CONTROL OF CURRENT MATERIAL
1958 ONWARDS . (1) **GAPS IN COVERAGE AND HOW TO BRIDGE THE GAPS ; A**
LIBRARIAN'S VIEW POINT.

(With reference to Gujarati Publications)

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1. *Introduction :*

Rabindranath Tagore's following words on the quality of public libraries are very relevant for the discussion of the Seminar : "In order to bring a library into the fullest use, it is necessary that its contents should be clearly and specifically brought to notice, otherwise it is difficult for the ordinary man to find his way about them, and the library is left as a city of vast accommodation that lacks sufficient means of communication".

2 *Functions of the National Library .*

(a) If the valuable literature and knowledge available in the library have to be fully utilized, the readers should be provided with necessary information. The basic tool of spreading this information among the readers is to provide them with a well prepared classified bibliography of books available in the library. The work of compiling National Bibliography can be undertaken only by the National Library because all the literature is received by it under the Delivery of Books Act (1954).

(b) First of all, the traditional functions of the National Library are those of acquisition, storage and organisation of Indian literature for use of scholars. The most complete set of National printed output can be found only in a National Library. In the fast changing circumstances of to-day, the functions of National Library have been enumerated in the Report of the Regional Seminar on the Development of National Libraries in Asia & the Pacific Area (1964). These are :

- (1) To provide leadership to the Nation's libraries ;
- (2) To serve as a permanent depository of all publications issued in the country ;
- (3) To acquire other types of material ;
- (4) To provide bibliographical services ;
- (5) To serve as a co-ordination Centre for co-operative activities ; and
- (6) To provide service to Government.

3. *INB—A look into the past :*

At present we should concentrate our attention on discussion of bibliographical control of the materials and information published in the Country

through INB. The first issue of INB comprising of books received in the National Library during 1957 was released on 15th Aug., 1958. There after the following Annual vols. have been published by Central Reference Library :

- 1958 to 1966 — Volumes published.
- 1967 to 1970 — Volumes not published.
- 1971 to 1979 — Volumes published.
- 1980 to 1983 — Volumes not published.
- 1984 — Monthly issues started from Jan., 1984.

The facts presented above indicate that the publication of INB has not been regular as it should be. It is most important therefore that the missing vols. are completed without any further loss of time. It is also necessary that a scheme is prepared so that there is a continuous and uninterrupted flow of monthly bibliography and annual volumes forthcoming from Central Reference Library.

The latest issue of the INB received by my library is for May, 1984, but actually received in Oct., 1984. This indicates a long delay in publication which must be minimised at any cost.

4. *The Time Lag :*

The bibliographical information published in the INB for May, 1984 contains list of publications largely published from 1981 to 1983. This raises a question as to whether the National Library is supplied with the published material in time as stipulated in the Delivery of Books Act (1954). If the publications are not received by National Library within the prescribed time limit, necessary legal action must be resorted to.

It is also likely that the books are received in time but the procedure of registration, classification, etc., is not accomplished in time. It is needles to emphasize that such time lag defeats the very purpose of the Bibliography as a book selection tool. I may illustrate a serious lapse. The following books in Gujarati published in 1982 have been included in the issue of May 1984. We wonder how such a thing is allowed to happen :

Shukla, Dhirajlal Nanlal

Pustak Pasandgi Parichay, 2nd edn. Ahmedabad.

Gujarat University, 1982 XI 78 p. 21 cm. 5-00. (G).

Badami, Charulata Harkant

Manovijnanni Paddhitio, Ahmedabad.

University Granth Nirman Board, 1982. (G).

5. *Suggestions for Improvements in the Coverage :*

INB does not include the following material at present :

- (a) Maps.
- (b) Musical Scores.

- (c) Periodicals & Newspapers.
- (d) Keys & guides to Text-Books.
- (e) Emphemeral material, such as, trade catalogues, telephone directories, reports of commercial bodies, publicity pamphlets, etc.

In the new context of study and research, the materials which are excluded from the bibliography may be considered for inclusion in it, at least the following categories :

- (a) Maps.
- (b) Musical scores.
- (c) Reports of Commercial Bodies.

6. *Apparent Incompleteness in Regional Language Collection in INB & Suggestions for Improvement :*

To take a sample, the following books are published in Gujarati and received in the copy-right collection of Gujarat Vidyapith Library. But these books are not included in the INB apparently because these were not received in the National Library.

1974

- (1) Chauhan, Keshubhai
Daityamanthi Dev.
- (2) Sevak, Navnit
Chambal ni Kotaroman.
- (3) Jadav, Joravarsinh
Lok Sahityani Ashvakathao.

1976

- (1) Patel, Trikambhai Kamnadas
Mahabharatman Stri Patrra.
- (2) Oza, Mafat
Ashubh.
- (3) Patel, Jayvadan
Antrang.

These are only a few selected examples. It is clear that there are books received under law—Press and Registration Act of 1867, by the State Depository Collection but not received in the National Library. The best workable arrangement would be that the State Central Library regularly sends lists of additions of its legal depository collection to the National Library. These lists are checked with the National Library legal depository collection. Such a procedure will identify the gaps at National Library enabling it to write to all for the missing books. It is a fact that the Central Library of the region gets more books in regional language than the National

Library. To bridge up the gaps of books of the regional languages the state depository libraries and National Library should actually find out the ways and means of effective co-ordination and co-operation in supplementing the information.

To prepare the bibliography speedily and to publish it in time, the work of compiling should be decentralized in the following manner :

- (a) The work of preparing the bibliography in regional languages should be assigned to those libraries where depository collection of books is maintained.
- (b) The format should be provided with specific rules to make the performance uniform.
- (c) The staff should be provided to carry out the work in Regional Centre.
- (d) The National Library should work as an agent to collect the information from different regions and to publish it regularly.

The main problem is to find out the source of information to get the literature for National Library. To work in co-operation with regional depository collection is seen above. Moreover the following ways also should be checked.

- (a) Accession list : South Asia is a monthly record of selected publications acquired from India, Pakistan and other countries by the U. S. Library of Congress. Some books in Gujarati acquired by LC are not found in INB. The 9 (nine) Gujarati books noted in Accession List, Dec. '72 and 16 books noted in Accession List May '73 are checked with the INB and found that these books are not included in it. It seems that these books are not available in the National Library. The Accession List is an important tool to identify gaps in INB. I have quoted only for Gujarati books but it may be thoroughly checked for other Indian languages also. Of course, the LC acquisition is necessarily selective.
- (b) The Publishers' Catalogues should also be checked with the depository collection for this purpose.

There are many reasons for not sending the literature in the depository collection e.g. :

- (1) The Rules might not be known to the Publishers/Printers.
- (2) They do not send books intentionally. They know that the depository libraries may not know the information of new publications.

To get the literature in the depository collection the following ways should be adopted :

- (1) The Laws must be enforced from time to time to get the printed materials in time.
- (2) The wide publicity of these laws should be given through the Government media of mass communication.

To make the collection exhaustive in the National Library all kinds of materials *i.e.*, Printed or Non-printed, thesis, manuscripts or recorded in audio-visual aids be made available.

The Delivery of Books Act (1956), Press & Registration Act, 1867, and Copy-right Act should be amended in such a way that all the materials which are useful for study and research must be covered under them.

To publish a National Bibliography is a tremendous task. To start and to prepare a bibliography covering fourteen (14) languages and English is easy at first stage than to maintain and regularize the publication in time. The Bibliography should be available promptly and no time lag should be allowed. To ensure a bibliography a book selection tool, it should be published in time at regular intervals as per fixed schedule.

To avoid delay, the automation is a must for INB. The use of computer can bridge the gap in publication schedule and gaps in the coverage also be bridged by implementating the above suggestions.

UNION CATALOGUE OF RESEARCH MATERIAL IN INDIA

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The need for a Union Catalogue :

The efforts of the UNESCO General Information Programme and the IFLA's programme of UBC in the last two decades has given an impetus to the increasing awareness and necessary follow-up action in the area of national bibliographic control. The NBC is the most important component in the current programme of the UBC, which hopes for a worldwide system for the control and exchange of information.

In our country coverage is fairly comprehensive in so far as the current national output is concerned what with the INB, Accession List South Asia, commercial ventures—both in the English language and modern Indian languages and other such lists.

It is a fact that "India" as a subject has gained importance in academic pursuits all over the world. The colonial impact on India and after Independence the functioning of the political and social life in India is getting plenty of attention among academics. The advent of Europeans into the country and its impact on various fields is evident in books published in the country as well as outside the country. Western interest in and research on "India" has become an established part of the cultural and academic life in the last four decades. Moreover the Indian academics also have begun to "de-colonise" this interest and research by encouraging and sponsoring indigenous cultural life and research activities. Primary and secondary sources produced in the country over the centuries are being made use of more and more. As the quality, quantity and availability of Indian publications have increased, so has the need for effective bibliographic control and appropriate bibliographic tools.

Printing came to India more than four hundred years ago and in its wake broke the tradition known upto that time as "Gurukula" school of scholarship when learning was handed down from generation to generation by word of mouth. Printing facilitated information to spread far and near. Indian civilization from the ancient times to modern days in all its facets were studied, researched and the outcome was more and more books.

Because of the geographical vastness and a variety of languages used, the material published in and on the country are lying all over the country

in libraries or with individuals with very little or no documentation. In addition to material in English and Sanskrit, books in modern Indian languages published in the country are dispersed throughout the country. Efforts should be made to identify and collate the material. In so far as material on India published abroad it may be presumed to have been documented properly in the form of catalogues, bibliographies, union catalogues, etc. Indian material has not received adequate attention, even though sporadic programmes like the one undertaken by the Sahitya Akademi in its four volume National Bibliography of Indian Literature 1901-1954 do exist. A Union Catalogue of research material in India is a programme which has to be launched to make the bibliographic control in India truly comprehensive. The project poses too many problems in way of multiplicity of languages, inadequate information about holdings in libraries—both private and public, geographical distances between places of learning, shortage of man power, money etc. Unless a beginning is made the vast material lying uncared for in many libraries all over the country will perish and the existence of such rich material will be a thing of the past. The Union Catalogue of Research material should be undertaken by a central agency with ramifications of regional and local undertones.

Concept of a Union Catalogue :

Herbert Putnam, as Librarian of Congress, in his annual report for 1901 wrote :

It is fully recognised by the Library of Congress that next in importance to an adequate exhibit of its own resources comes the ability to supply information as to the resources of other libraries. As steps in this direction may be mentioned :

First—The acquisition of printed catalogues of other libraries, both American and foreign.

Second—An alphabetic author catalogue on cards of books in departments and bureau libraries in Washington.

Third—A similar catalogue in some of the more important libraries outside Washington.

Thus a concept of a national union catalogue was truly and well defined as far back as eighty five years ago and to-day the National Union Catalogue is a recognised international reference core material.

Our Programme :

Though to achieve such level of comprehensiveness and technical competence in our country appear more a dream than a reality efforts should be made in that direction.

The passage of the Press and Registration Act in 1867 made it possible to bring out quarterly catalogues as appendices to Gazettes. The books published in India and deposited at the office of the Registrar of Books in British provinces enabled the bringing out of lists of books with necessary details. Such details, in addition to author, title, subject included the price and total print runs. The latest directive from the UNESCO Secretariat to its member states gives a restructured questionnaire to draw up a country's book production statistics. This includes the price and print runs, which were in our own quarterly catalogues brought out on the basis of book deposits under the Press and Registration of Books Act, 1867, but excluded from modern bibliographies.

Material from such catalogues should be collected, collated, sorted and arranged languagewise. The task is too huge and should be done in phases taking into account the total book production of the country. As a second step the libraries and private collections which have printed catalogues should be collected and entries transferred to a central pool. Such collection of entries have to be checked against actual holdings of libraries and locations noted. In addition, the physical condition of the books should also be indicated for a future national programme of conservation and microfilming. A beginning has to be made in the immediate future. Or else with the slant an Anglo-Saxon material in the "modern library" the indigenous material will get into the background and will not be available for future generation of research workers.

APPLICATION OF COMPUTERS FOR CURRENT BIBLIOGRAPHIC CONTROL IN INDIA

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Deputy Director of Documentation and Library Service,
Tamil University, Thanjavur,
Tamil Nadu

0. *Objectives of this paper :*

- 0.1 To contribute to the concept of the Universal Bibliographic Control, India should be made to keep abreast with the other developed countries which make to the world known of their output of publications comprehensively, by publishing their National Bibliographies regularly with the shortest possible delay.
- 0.2. Avoiding terminological feedings and Utopian planning and suggestions, an Indigenous Computer Software for Information Storage and Retrieval which is capable of preparing a Computerised Monthly National Bibliography, has been prepared, the printout of which is placed for scrutiny.

1. *Prerequisite for the Computerisation of Indian National Bibliography :*

Necessary modifications are to be made in each and every step of publication services of the existing INB when it is proposed to be computerised.

1.1. *Collection of Data*

Any National Bibliography cannot claim cent percent coverage of the publications of its Nation.

1.2. *Indian Context*

Printing the value of money in Indian currency in its 13 regional languages apparently discloses the quantum of difficulty of collection of data about the Indian publications in the various and numerous regional languages.

1.3. *Regionalism of Legal Deposit*

If a survey is made on the number of Tamil language books deposited at the Connemara Public Library, Madras during a span of certain years and compared with that of the figure at the National Library, Calcutta, a considerable difference will be noticed.

RECOMMENDATIONS

1.3.1. *Regional Legal Deposit Centres*

As India is a country unifying several regional linguistic territories, each capital city of a particular regional linguistic territory, should have a legal deposit centre of its concerned regional language. This will tempt the publishers to deposit with a sense of Regional bias.

1.3.2. *Postal Expenses-Liberalisation*

If a parcel containing books is found to be addressed to the Regional legal deposit library, the publisher may be exempted from postal charges. This provision will ensure the deposits with minimum gaps.

1.4. *Penal Provision in the Delivery of Books and Newspaper Act (1954)*

The act imposes only a Penalty of a fine which may extend to Rupees fifty only, if a Publisher fails to deposit a book after 30 days of its publication. A book is an "Evidence" of the knowledge of an author. The act of crime of concealing of an "Evidence" in a criminal case can be applied to a publisher who conceals his publication to the National Bibliographic Centre.

RECOMMENDATIONS

1.4.1. *Delivery with a Warrant*

In the existing Act, a Penal Provision should be inserted comparable to the Civil Act "Food and Adulteration Act". The disobedience of this Act should be dealt with not only a penalty of Fine but coupled with imprisonment for a considerable period. This only can make the "Delivery" practical.

1.4.2. *Printing Press Owners*

If a book is not legally deposited within 30 days of its publication, besides the publisher, the owner of the printing press should also be punished by the court. This joint responsibility will be effective.

1.5. *Classification of Books for a National Bibliography*

Considerable delay is caused for classifying the books received under the Act, according to some scheme of classification.

1.5.1. *The First End*

When a book is undergoing printing and binding processes, some users and libraries will be anxious to get copies of the book as soon as they are at the output end. Some books reach other Libraries earlier than they reach Legal Deposit Libraries. The books are classified earlier at those libraries because they cannot wait for the publication of the relevant National Bibliography so as to use the same classification number furnished therein. More over many libraries differ in the number of the edition of the same scheme of classification. In the case of some complicated titles, two eminent classifiers may assign three classification numbers for a single book. Hence the classification number provided in the National Bibliographies will not help the other libraries so significantly.

1.5.2. *Classification and Computer Application*

To prepare a Computerised Bibliography, the subject headings can be entered in the database in the natural language easily. Converting a subject heading into an artificial ordinal number will pose some problems during the data processing work in the computer. Hence the time spent in classifying books can be saved. Alternatively suitable subject headings can be used.

1.5.3. *Subject Guide to Books in Print*

Though United States of America does not have a National Bibliographical Service managed by its Government, a commercial organisation is able to do the same service. The Subject Guide to Books in Print is a computer produced bibliographical tool. Instead of using any scheme of numerical classification, it follows the Ninth Edition of Library of Congress Subject Headings. Due to the information explosion new subject headings are flooding in. This tool assigns provisional subject headings when L C Headings are not available.

Hence it is evident that any enumerative classification scheme or any edition of subject headings cannot comply with the out-burst of new subject headings of the present publication boom. The only solution is the construction of a Thesaurus to suit the need of each National Bibliographical Agency.

1.5.4. Regarding the classification of entries for a National Bibliography the following concepts are recommended :

1.5.4.1. *Abandoning of Classification for Bibliographic Service*

The 16th Edition of D. C. followed in I. N. B. will not be suitable for various Indian libraries which are getting books published in India with intrinsic Subject Headings pertaining to India only. For example for a Subject Heading "Non-violence"—D. C. Number 301.150, 301.153(1) (301.153-Social Movements) has been newly coined and used, with a compromising statement "Expansion has been used where D. C. Number is not available for a specific subject". If depth classification is used for all Indianised titles, all D. C. numbers will have square brackets.

Provision of 6th edition Colon Classification numbers is like building a memorial. Can we find a C. C. Number for Fortran Programming ?

The "Expansion" confession can be pleaded throughout.

1.5.4.2. *Identification Provision*

As soon as books are received, they can be accessioned and the Accession Numbers may be used as Location Numbers for Bibliographical Entries. For stacking purpose they may be classified later as usual after the data for the Bibliographical Services are provided. This will accelerate the speed of publication of INB.

1.6. *Cataloguing of Data*

Entries are not arranged according to any Catalogue Code. A standardised format to conform to an International Standard will help the computerised database exchangeable with those of other countries.

1.7. *Publication Service*

To publish a National Bibliography promptly and comprehensively all the above mentioned factors are to be closely and logically studied. Each one of the steps will affect the next step and spoil

its perfection as a whole. The stage which causes delay is to be identified and rectified. Since this is a computer aided programme, wastage of computer time will amount to huge wastage of money.

1.7.1. *Coverage of Period-Dropouts*

Books published and received in 1974 are found reported in 1974 INB. But books published in 1974 which have reached late are found in the 1975 INB. As in the case of Ulrich's International Periodicals Directory reporting "Ceased Periodicals" in the next year, the INB should report the dropout publications of the previous year, separately and should not mix them with the current year. This is necessary to prepare a correct statistics of books published during a year.

1.7.2. *Coverage of Documents*

Besides books, maps, gramophone records, audio and video documents should also be covered. At present subject related to Government Reports are scattered in Part B. Government Reports can also be brought under one sequence.

1.7.2.1. *Recommendation*

The Delivery of Books and Newspaper Act, 1954 should be amended to cover audio and video documents also that are produced in India, so that an archive for all types and forms of embodied knowledge can be maintained by the National Library.

1.7.3. *Arrangement of Entries*

As it has been suggested earlier that classification can be replaced by Subject Headings, the arrangement of entries in the Computerised INB can be according to the subjects arranged either alphabetically or according to any other logical sequence.

1.7.3.1. *Numbering of Entries*

Each entry of the monthly INB can be serially numbered for easy location. Continuation of serial numbers is to be maintained in the INB of the next month.

1.7.4. *Indexes*

Since the body of the INB will be arranged subjectwise, an Author Index and Subject Index will be produced by the computer, mentioning the Location Number for each item in the Index.

2. *Implementation of the Computerization of INB :*

2.1. *Hardware*

The National Library can install a computer system at Calcutta, suitable for handling the anticipated quantum of data. As an alternative a Pilot Project can be undertaken entrusting the INB computerisation service to any suitable existing Computer Centre in India. After assessing the services of the pilot project, next steps can be taken suitably.

2.2 *Software*

At present India is depending upon the software of foreign countries like CAN/SDI, MINISIS, etc. These softwares do not provide facilities for creating a Database, editing it, and processing the data suitable for various degrees of Information needs.

Our purpose is to prepare a software which can create a data base of the publications of India and to retrieve the Information from various points of approach.

In India very few libraries have started attempting computerised activities. A software prepared by a library after long strenuous efforts, will be the intellectual property of the programmers involved in it and will not be generally lent to others.

2.2.1. *Speciality in Software Provisions*

Depending upon the skill of the programmers each software will vary from the other and some will have extreme flexibility, compatibility and multipurpose operations. For example the Publishers' Trade List Annual and British Books in Print are both computer produced, and the same software can be used to bring out many byproducts using the same data base to bring out Subject Guide to Books in Print, Children's Books in Print, Medical Books in Print, Paper Bound Books in Print, Business Books in Print, Religious Books in Print, Scientific and Technical Books in Print and Large Type Books in Print, etc.

2.2.2. *Commercial Challenge to National Bibliographies*

In both developed and under developed countries, wherever there is a National Bibliographical system maintained by the Government, there are some commercial firms which compete with them by giving the Bibliographical Information earlier, than the National Bibliographies with differences in approach. This is due to the possession of a more effective computer software than their rivals for the publication of bibliographies.

3. *TAMIL/SDI Software of Tamil University, Thanjavur*

A multipurpose and flexible Information Storage and Retrieval Software has been prepared by the Tamil University. Technical details are explained in the other paper which follows this paper. This software can be used for creation of a database of the books published in India and also to publish a computerised upto date monthly Indian National Bibliography.

4. *Proposal for the Pilot Project of the Computerised Indian National Bibliography*

The National Library, before procuring a computer system and preparing a software by itself suitable for the purpose, can try the feasibility of Computerising the monthly INB by entrusting a Pilot Project to the Tamil University or any other centres in India possessing such a software. The scheme of such a project will work out as detailed beneath.

4.1. *Data Entry*

In a monthly INB, approximately there are 350 to 400 entries. This means that only about 20-25 books are entered in the Accession Register every day.

4.1.1. *Supply of Data*

Since it has been suggested that classifying books assigning ordinal numbers for Bibliographical Service purpose, can be substituted by assigning Indexing Headings, there will not be delay in the classification step. The entries made in the accession register can be xeroxed and sent by post daily to the Tamil University.

4.1.2. *Data Storage*

The Computer Centre of the Tamil University will enter the data that are received daily by post.

4.2. *Processing Service*

On the last day of a month after entering the data that is received by post on that day, the computer can process the data within a few minutes. The output will be in the form of a monthly INB with a body of entries arranged subjectwise and accompanied with Author Index and Subject Index.

4.3. *Publication Service*

If a letter quality computer printer or an electronic typewriter is used, the computer print out will be suitable for making films in the process camera, which can be made into off-set printing plates. The Tamil University off-set press equipped with suitable printing machine can bring out the printed copies of a monthly INB consisting of about 100 pages within three days.

Thus the INB of a particular month can be released on the third day of the next month.

4.4. *Cumulation Service*

The data base of 12 months can be cumulated by the computer within a day. The printing process can be finished in 15 days. By January 15th of each year the Annual Cumulation can be released.

4.5. *By-products of INB Data Base*

Using the same data the following by-products can be prepared :

- A. Fascicule for each Indian Language.
- B. Subject Bibliographies on any required subject.

4.6. *Bibliometry*

Only computerisation can make it possible to furnish statistics relating to the various aspects of the National Bibliography.

4.7. *SDI Service*

Besides monthly INB Publication, monthly SDI Reports consisting of books relevant to the profiles of researches can be prepared using the same data base.

5. *Adaptability*

The present software is so flexible that it can be adopted to make any desired provisions and alterations that may be suggested by experts and users.

6. *Computerisation of Index Indiana*

The same software explained above can produce a computerised monthly Index Indiana, an Indexing Periodical of the Indian Periodical Literature.

A Pilot Project can also be tried on the same lines suggested for the Computerised INB.

7. *Limitations in Computerisation*

At present the computer output is only in Roman Script. Diacritical marks etc., for use in transliteration are not provided in the existing computer printers. Improvisions are to be made to solve these problems. Recently computers using some of the Indian regional languages have been introduced which will pave the way to facilitate production of Fascicule in different Indian languages.

8. *Conclusion*

This is high time to break out of the shackles of the conventional manual method of compiling our National Bibliography and India should elbow out of the other countries and place herself in the International map of automation.

SPECIMEN I

Entries are arranged according to D.C. Ed. 16, subjectwise

Author Index and Subject Index are provided

Datas were collected from Accessions List South Asia October 1984 issue

**INDIAN NATIONAL BIBLIOGRAPHY
COMPUTERISATION PROJECT
(TAMIL/MARC SERVICE)
MARCH-1985**

**INDIAN NATIONAL BIBLIOGRAPHY
COMPUTERISATION PROJECT
(TAMIL/MARC SERVICE)
MARCH, 1985**

301.15 PSYCHOLOGY SOCIOLOGY

- 1 Bhan (Kiran Submal)
- Psychology of Human Aggression
Delhi/Northern Bk Centre/1984/
98 p/23 cm
Rs. 55 (E)

301.2 CULTURE : SOCIOLOGY

- 2 Ahmad (Nisar)
- Stone Age Cultures in Upperson
Valley
New Delhi/Ramanand Bhawan/
1984/116 p/25 cm
Rs. 25 (E)

301.34 COMMUNITIES

- 3 Chandra (Bipan)
- Communalism in Modern India
Delhi/Vikas/1984/363 p/23 cm
Rs. 150 (E)

301.450954 TRIBES

- 4 Bombay-Committee/Expansion
- Adhivasi Areas of Thana Dist
Report
Bombay/Govt Press/1984/52 p/
25 cm
M. Fiche (E)

327.54 INDIA : FOREIGN POLICY

- 5 Benner (Jeffrey)
- Structure of Decision India's
Foreign Policy
New Delhi/South Asian Pub/1984/
214 p/22 cm
Rs. 85 (E)

329.954 COMMUNIST PARTY

- 6 CPI-Central Committee
- Tasks on the Trade Union Front
Delhi/CPI Party/1984/58 p/22 cm
Rs 2 (E)

334.2 BANKING CO-OPERATION

7. Choudhary (C. M.)
- Bank Rate and Credit Control in
India
Delhi/Amar Prakashan/1984/183
p/22 cm
Rs. 100 (E)
2 LNL/86

338.64 SMALL-SCALE INDUSTRY

8. Bhattacharyya (Hrishikes)
Entrepreneur Banker—Small-Scale
Industry
Delhi/Deep & Deep/1984/128 p/
22 cm
Rs. 95 (E)

340 LAW

9. Gupta (G. S.)
Commentaries on Law of Injunc-
tions
Alahabad/Vijaya/1984 / 356 p / 25
cm
Rs. 100 (E)

491.29 VEDIC LANGUAGE

- | | |
|---|--|
| <p>10. Bhattacharji (Sukumari)
Literature in the Vedic Age
Calcutta/Bagchi/1984/v17/?? cm
Rs. 130 (E)</p> | <p>11. Kumaralalaa Vyasasishya
Vedavyasaprampara
Delhi/Ithihasavidya Prakashan/
1984/67 p/22 cm
Rs. 20 (H)</p> |
|---|--|

495.4 TIBETAN LANGUAGE

12. Bstan-gnis-glin-pa
Yan tig ye ses mthon grol gyi chos
Darjiling/Chopal Lama/1984/388p/
28 cm
Rs. 270 (Ti)

631.4 SOIL : AGRICULTURE

13. Bocharov (A. P.)
Wind Erosion of Soils
Delhi/Oxonian/1984/90 p/25 cm
Rs. 75 (E)

821 ENGLISH : POETRY

14. Balurau (S.)
Still Small Voice : Poems
Delhi/Balurau/1984/72 p/22 cm
Rs. 25 (E)

823 ENGLISH : FICTION

- | | |
|--|---|
| <p>15. Abbas (Khawaja Ahmad)
World is My Village
Delhi/Ajanta Pub/1984/534 p/22
cm
Rs. 150 (E)</p> | <p>16. Anand (Mulk Raj)
Bubble
New Delhi/Arnold Heinemann/
1984/604 p/22 cm
Rs. 125 (E)</p> |
|--|---|
17. Bhattacharyya (Birendra Kumar)
Yaruingam—People's Rule
Guwahati/Christian Lit. Cen/
1984/338 p/19 cm
Rs. 50 (E)

891.2 SANSKRIT

- | | |
|--|--|
| 18. Vagbhata
Vahata's Astanga Hrdaya Samhita
Kottayam/Vaidyasathy Press/
1984/226 p/22 cm
Rs. 60 (S) | 19. Vangasena
Cikitsasarasangraha
Calcutta/Jvanada/1984/1030 p/
21 cm
M. Fiche (S) |
|--|--|

891.43 HINDI LITERATURE

- | | |
|--|---|
| 20. Bachchan (Harbans Rai)
Baccana ke Visishta Patra
Delhi/Prabhata Prakashan/1984/
116/22 cm
Rs. 30 (H) | 21. Chaturvedi (Parsuram)
Santa-sahitya ki Rupaarekha
Allahabad/Bharati Bhandara/1984/
158 p/22 cm
Rs. 45 (H) |
|--|---|

U891.43 URDU LITERATURE

- | | |
|---|---|
| 22. Aziz Jang Vala
Al-tanis va al-tazkir
Hyderabad/Dakin/1984
M. Fiche (U) | 23. Bahri (Mahmud)
Kulliiyyat-i Bahri
Lucknow/Kishor/1984
M. Fiche (U) |
| 24. Khayal (Mir Muhammad)
Hadayaq anzar
Delhi/Mahmud al-Matabi/1984
M. Fiche (U) | |

891.44019 BENGALI: DICTIONARY

25. Bhattacharya (Subhasa)
Adhunik Bamil Prayoga Abidhana
Kalikata/Di Ema Laibreri/1984/
291 p/22 cm
Rs. 30 (B)

891.441 BENGALI: POETRY

26. Aparajita Debi
Aparajita-racanabali
Kalikata/Paribesaka Karuna/1984/
193 p/22 cm
Rs. 20 (B)

891.443 BENGALI: FICTION

27. Gangopadhyaya (Sunil)
Syama Saheba
Kalikata/Ananda/1984/95 p/19 cm
Rs. 10 (B)

891.5 PERSIAN LITERATURE

- | | |
|--|--|
| 28. Muinuddin Chishti
Divan-i khvajah-yi khvajgan...
Dhanbad/Hindustan/1984/195 p/
23 cm
Rs. 20 (Pe) | 29. Shorish (Ghulam Husain)
Tazkirah-yi shorish
Lucknow/U. P. Urdu Academy/
1984/572 p/23 cm
Rs. 34 (Pe) |
|--|--|

894.811 TAMIL LITERATURE

30. Velupillai (C V)
inip patamaten
Madurai/Meenakshi/1984/195 p/
19 cm
Rs. 11 (T)

924 RITUALS

31. Abbon (J)
Indian Ritual and Belief
New Delhi/Delhi/1984/160 p/22 cm
Rs. 250 (E)

928.42 PUNJABI LITERATURE

- | | |
|---|---|
| <p>32. Amrita Pritam
Amrita di dafri Imaroza
Delhi/Nagmani Prakashan/1984/
193 p/22 cm
Rs. 25 (P)</p> | <p>33. Gilla (Gurabansa)
Maigu Ika nari
Amritsar/Loka Sahita Prakashana/
1984/144 p/19 cm
Rs. 30 (P)</p> |
| <p>34. Kesara Singha
Ware Shaha di mauta :maula
Patiala/Amarajit Prakashan/
1984/280 p/22 cm
Rs. 40 (P)</p> | <p>35. Nara (Ishara Singha)
Penjaba Sikkha Pantha ...
Delhi/Ishara Singha/1984/91 p/
19 cm
Rs. 12 (P)</p> |

928.9143 HINDI WRITERS

- | | |
|--|--|
| <p>36. Diwana (Indubala)
Baccana-anubhuti aura abhivyakti
Delhi/Surya Prakashan/1984/
147 p/22 cm
Rs. 40 (H)</p> | <p>37. Gupta (Asa)
Madhyayugina Hindi Kavi
Delhi/Atmaram/1984/323 p/22 cm
Rs. 95 (H)</p> |
|--|--|

928.9144 BENGALI: BIOGRAPHY

- | | |
|--|--|
| <p>38. Cakrabarti (Gangesa Candra)
Srisrianandamayi Ma Lila-prasanga
Kalikata/Deja/1984/259 p/23 cm
Rs. 25 (B)</p> | <p>39. Cattopadhyaya (Manju)
Sramika netri Santoshakumari Debi
Kalikata/Manisha Granthalaya/
1984/72 p/23 cm
Rs. 8 (B)</p> |
|--|--|

954.87 KARNATAKA : HISTORY

40. Basavaraja (K R)
History and Culture of Karnataka
Dharwad/Chalukya Pub/1984/
725 p/25 cm
Rs. 190 (E)

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 Anand (Mulk Raj) 16
 Aparajita Debi 26
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 Bahri (Mahmud) 23
 Balurau (S.) 14
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 Benner (Jeffrey) 5
 Bhan (Kiran Submal) 1
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 Bhattacharya (Subhasa) 25
 Bhattacharya (Sukumari) 10
 Bhattacharyya (Hrishikes) 8
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 Choudhary (C. M.) 7
 Diwana (Inderbala) 36
 Gangopadhyaya (Sunil) 27
 Gilla (Gurabamsa) 33
 Gupta (Asa) 37
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 Kesara Singha 34
 Khayal (Mir Muhamad) 24
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 Muinuddin Cishti 28
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SPECIMEN II

Entries are arranged according to Alphabetical Subject Headings

Author Index and Subject Index are provided

Datas were collected from Accessions List South Asia October 1984 issue

**INDIAN NATIONAL BIBLIOGRAPHY
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MARCH-1985**

INDIAN NATIONAL BIBLIOGRAPHY
COMPUTERISATION PROJECT
(TAMIL/MARC SERVICE)
MARCH, 1985

BANKING CO-OPERATION

1. Choudhary (C. M.)
Bankrate and Credit Control in
India
Delhi/Amar Prakashan/1984/
183 p/22 cm
Rs. 100 (E)

BENGALI: BIOGRAPHY

- | | |
|--|--|
| <ol style="list-style-type: none"> 2. Cakrabarti (Gangesa Candra)
Srisrianandamayi Ma Lila-prasanga
Kalikatta/Deja/1984/259 p/ 23 cm
Rs. 25 (B) | <ol style="list-style-type: none"> 3. Cattopadhyaya (Manju)
Sramika Netri Santoshakumari Debi
Kalikata/Manisha Granthalaya/
1984/72 p/23 cm
Rs. 8 (B) |
|--|--|

BENGALI · DISTIONARY

4. Bhattacharya (Subhasa)
Adhunika Bangla Prayoga Abidhana
Kalikata/Di Ema Laibreri/1984/
291 p/22 cm
Rs. 30 (B)

BENGALI FICTION

5. Gangopadhyaya (Sunil)
Syama Saheba
Kalikata/Ananda/1984/95 p/19 cm
Rs. 10 (B)

BENGALI POETRY

6. Aparajita Debi
Aparajita-racanabali
Kalikata/Paribesaka Karuna/1984/
193 p/22 cm
Rs. 20 (B)

COMMUNISTS

7. CPI-Central Committee
Tasks on the Trade Union Front
Delhi/CPI Party/1984/58 p/22 cm
Rs. 2 (E)

COMMUNITIES

8. Chandra (Bipan)
Communalism in Modern India
Delhi/Vikas/1984/363 p/23 cm
Rs. 150 (E)

CULTURE : SOCIOLOGY

- 9 Ahmad (Nisar)
Stone Age Cultures in Upperson
Valley
New Delhi/Ramanand Bhawan/
1984/116 p/25 cm
Rs. 25 (E)

ENGLISH · FICTION

- | | |
|--|--|
| <p>10 Abbas (Khawaja Ahmad)
World is My Village
Delhi/Ajanta Pub/1984/534p/
22 cm
Rs 150 (E)</p> | <p>11 Anand (Mulk Raj)
Bubble
New Delhi/Arnold Heinemann/
1984/604 p/22 cm
Rs. 125 (E)</p> |
| <p>12 Bhattacharyya (Birendra Kumar)
Yarungam—People's Rule
Guwahati/Christian Lit Cen/1984/
138 p/19 cm
Rs 50 (E)</p> | |

ENGLISH · POETRY

- 13 Balurau (S)
Still Small Voice Poems
Delhi/Balurau/1984/72 p/22 cm
Rs 25 (E)

HINDI LITERATURE

- | | |
|---|---|
| <p>14 Bachchan (Harbans Rai)
Baccana ke Visishta Patra
Delhi/Prabhata Prakashan/1984/
116 p/22 cm
Rs 30 (H)</p> | <p>15 Chaturvedi (Parsuram)
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Allahabad/Bharati Bhandara/1984/
158 p/22 cm
Rs. 45 (H)</p> |
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- | | |
|---|--|
| <p>16 Diwana (Indubala)
Baccana-anubhuti aur Abhivyakti
Delhi/Surya Prakashan/1984/
147 p/22 cm
Rs 40 (H)</p> | <p>17. Gupta (Asa)
Madhyayagina Hindi Kavi
Delhi/Amaram/1984/323 p/22 cm
Rs 95 (H)</p> |
|---|--|

INDIA : FOREIGN POLICY

18. Benner (Jeffrey)
Structure of Decision : India's
Foreign Policy
New Delhi/South Asian Pub/1984/
214 p/22 cm
Rs. 25 (H)

KARNATAKA : HISTORY

19. Basavaraja (K. R.)
History and Culture of Karnataka
Dharwad/Chajukya Pub/1984/
725 p/25 cm
Rs. 190 (E)

LAW

20. Gupta (G. S.)
Commentaries on Law of Injunctions
Alahabad/Vijaya/1984/356 p/
25 cm
Rs. 100 (E)

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- | | |
|---|---|
| <p>21. Muinuddin Cishti
Divan-i khvajah-yi khvajgan . .
Dhanbad/Hindustan/1984/195 p/
23 cm
Rs. 20 (Pe)</p> | <p>22. Shorish (Ghulam Husain)
Tazkirah yi shorish
Lucknow/U. P. Urdu Academy/
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|---|---|

PSYCHOLOGY : SOCIOLOGY

23. Bhan (Kiran Submali)
Psychology of Human Aggression
Delhi/Northern Bk Centre/1984/
98 p/23 cm
Rs. 55 (E)

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- | | |
|--|--|
| <p>24. Amrita Pritam
Amrita di dairi Imaroza
Delhi/Nagamani Prakashan/1984/
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Rs. 25 (P)</p> | <p>25. Gilla (Gurabamsa)
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Amritsar/Loka Sahita Prakashana/
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| <p>26. Kesara Singha
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Patiala/Amarajitha Prakashan/
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Rs. 40 (P)</p> | <p>27. Nara (Ishara Singha)
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Delhi/Ishara Singha/1984/91 p/
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28. Abbott (J.)
Indian Ritual and Belief
New Delhi/Usha/1984/560 p/
22 cm
Rs. 250 (E)

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- | | |
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| <p>29. Vagbhata
Vahata's Astanga Hrdaya Samhita
Kottayam/Vaidyasarthi Press/
1984/226 p/22 cm
Rs. 60 (S)</p> | <p>30. Vangasena
Cikitsasarasangraha
Calcutta/Jvanada/1984/1030 p/
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M. Fiche (S)</p> |
|--|---|

SMALL-SCALE INDUSTRIES

31. Bhattacharyya (Hrishikes)
Entrepreneur Banker—Small-Scale
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SOIL : AGRICULTURE

32. Bocharov (A. P.)
Wind Erosion of Soils
Delhi/Oxonian/1984/90 p/ 25 cm
Rs. 75 (E)

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33. Velupillai (C. V.)
inip patamaten
Madurai/Meenakshi/1984/195 p/
19 cm
Rs. 11 (T)

TIBETAN LANGUAGE

34. Bstan gnis-glin-pa
Yan tug ye ses mthon grol gyi chos
Darjiling/Chopal Lama/1984/
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Rs. 270 (Ti)

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35. Bombay-Committee/Expansion
Adhivasi Areas of Thana Dist.
Report
Bombay/Govt. Press/1984/52 p/
25 cm
M. Fiche (E)

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|--|---|
| 36. Aziz Jang Vala
Al-tanis va al-tazkir
Hyderabad/Dakin/1984
M. Fiche (U) | 37. Bahri (Mahmud)
Kulliyat-i Bahri
Lucknow/Kishor/1984
M. Fiche (U) |
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Hadayag anzar
Delhi/Mahmud al-Matabi/1984
M. Fiche (U) | |

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| 39. Bhattacharji (Sukumari)
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SOFTWARE FOR BIBLIOGRAPHIC CONTROL IN INDIA TAMIL/SDI AND TAMIL/MARC SYSTEMS

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Introduction :

Collection, classification, maintenance and dissemination of information to the user community is the major task of the information scientists today. As we live in an era of information explosion, the need of information is in abundance and the speciality of fields are growing day by day. In this computer era it is a well known fact that computers play an important role in each and every aspect of human activity. Information science as it stands today is a profession by itself and so it challenges the information scientists to devise a system for an effective and efficient way of storage, processing, control and dissemination of information. The conventional library methodology will not be helpful to suit the demand of the present day information society. Hence the demand for information necessitates the introduction of automation equipments in libraries and information centres to aid the information scientists for information handling and dissemination.

With the recognition that computers offer a great potential in the task of information handling it is also possible to utilise it as an effective tool for storage, manipulation, analysis and dissemination of the ever expanding volume of data in the information houses. Based on the nature of application, the following are the functions of automatic equipments in libraries :

- 1 Acquisition process.
2. Cataloguing (like MARC systems) and compilation of directories and indexes for bibliographic control.
3. Circulation document control and preservation.
4. Information retrieval service.
5. User service.

Even before the computers were used in library automation, other types of automatic or semi automatic equipments like typewriters, teletype machines, tape writers, accounting machines, key punch and sorters, punched cards and readers were used for library services. By referring to early history of computer automation in libraries we find that a number of universities such as University of Maryland, University of Illinois, Michigan

University etc. have introduced the mechanical and semi automatic means for cataloguing and bibliographic control in their libraries. During early 1960's a computer information retrieval system was launched by Western Reserve University in United States and in 1963 the National Library of Medicine put into operation a computer based information retrieval system called MEDLARS.

Information plays a vital role in promoting the researches in various fields. Hence it necessitates to have a suitable computer based information system for storage, analysis and retrieval of information to keep in line with the speed of the information explosion. Keeping this in view the library and documentation centre of the Tamil University in collaboration with the computer centre has designed two computer based library information systems namely TAMIL/SDI and TAMIL/MARC. This paper deals with the design, functional operation and technical aspect of the library information systems called TAMIL/SDI and TAMIL/MARC.

The Objectives of this Paper

The main objective of this paper is to discuss the various functional modules and their roles in bibliographic control and information dissemination. The major functions of the two library information systems can be listed as follows :—

- (a) Data base creation-verification and validation.
- (b) Generating profile matchings and enhancement reports (SDI).
- (c) Online query report system.
- (d) Machine readable cataloguing service (MARC).
- (e) Monthly publication service.
- (f) Indexing system.
- (g) Annual cumulative publication service.

It is important to give a brief explanation of the nature of computing resource available in the Tamil University before discussing the technical and programming aspects of the library information system.

Computer Resource at Tamil University

The Tamil University computer centre is equipped with a fourth generation microprocessor based microcomputer system. The available computer system is very small in configuration with a 64 K bytes of main memory and auxiliary storage compared with mainframes having 1 or 2 Mega bytes of main memory. Program transportability to the same group of computers, software enhancement and number of language processors are considered to be the major advantages of this system. The Z-80 micro processor being the basic building block of most of the popular micro-

computers of today, it will facilitate the implementation of the library software in other computers of the same group with minor modifications. The computer is interfaced with an Electronic Typewriter with Daisy wheels of 15 different font styles and it will help in printing of master copies of catalogues, of bibliographies and SDI reports and also for publication purposes. The microcomputer on which the TAMIL/SDI and TAMIL/MARC are implemented is an indigenous make having the following configuration.

A. Hardware

- (a) An 8 bit CPU with Z-80 microprocessor having multiprocessing capability.
- (b) 64 K bytes of main memory per user station.
- (c) Dual floppy drives of storage capacity of about 1.25 million bytes (characters).
- (d) A winchester hard disc with an auxiliary storage of 20 Mega bytes.
- (e) A Dot matrix printer with a speed about 150 CPS.
- (f) Four video display units.

B. Software

- (a) Multi user multi tasking operating system compatible with CPM.
- (b) BASIC, COBOL, FORTRAN, PASCAL, PL/1 and 'C' compilers.
- (c) System utilities.
- (d) Word processing system, SORT, DATA PAK utilities etc.
- (e) Data Base Management Systems.

Library Software

Both the TAMIL/SDI and TAMIL/MARC are codified in BASIC language interpreter to speed up and simplify the initial program development. The TAMIL/SDI programme is of about K bytes of memory in size and TAMIL/MARC is of the size of 40 K bytes. The above mentioned configuration of the microcomputer system could process about more than 100,000 records of data in TAMIL/SDI as well as in TAMIL/MARC system. The software packages are designed in a "TOP-DOWN" design concept with a modular approach. While running the packages on the micro computer, the active job only remains in the memory and other modules are swapped from disc whenever needed. The TAMIL/SDI is a computer based information system for the bibliographic control of periodical literature whereas the TAMIL/MARC is a computerised cataloguing system for the books and non-book materials.

The Main Features of TAMIL/SDI and TAMIL/MARC.

Both the systems are very interactive in nature to facilitate the creation of data base and processing of information. Also the programmes are menu driven in nature which will help even the non professionalist at each and every stage of its operation. The programmes are designed to have 'batch mode' as well as 'on line' mode of operation which is very essential for data base creation, validation, querying and requesting for report, etc.

I TAMIL/SDI

Before we explain the operational details of the system it is relevant to define the computerised TAMIL/SDI system as follows.

"It is the process by which the information about documents are automatically and selectively disseminated in a pre-defined sequence to the researchers of the respective fields after duly matching their interest profiles against the data bases available in the machine readable form at regular intervals of time, perhaps monthly using more effective search strategies".

The search strategies of SDI represents the current awareness information needs of an individual. The logical functions of SDI system can be summarised as follows :

- (i) Based on the areas of interest an interest profile should be organised.
- (ii) While organising the above profile, care must be taken that the entries in the user profile should have more probability of occurrence in the main data base.
- (iii) The documents should be suitably analysed and an abstract is prepared and stored in machine readable form.
- (iv) Preparation of Thesaurus and the keyword entries.
- (v) Evolving a suitable search strategy to match the user interest profiles against the document entries of the data base.

The TAMIL/SDI system is an integrated system with the following sub-systems.

- (a) Primary control programme.
- (b) Main data base system.
 - (i) Input system.
 - (ii) Data record verification and validation.
 - (iii) Updating system.
- (c) SDI online query report system.
- (d) Publication processing system.
- (e) Indexing system.

The functional block diagram of the SDI system given in figure (1) will explain how the different sub systems work in co-ordination during the information processing task.

The functions, usage and implementation details of the various sub-systems listed earlier are explained in detail as follows.

I. (a) *Primary Control Programme*

It is imperative that the various sub-systems of the TAMIL/SDI should be co-ordinated in order to perform the various tasks of information storage, processing, searching and retrieval. The main or primary programme links the sub programmes at appropriate levels to achieve the above mentioned tasks. The operator of the system can switch over from the main system to any other part of the system or menu by typing a suitable selection code.

I. (b) *Main Data Base System*

For an effective and efficient information processing it is suggested that the data base should be created with a suitable format. The speed of operation, efficiency, searching and updating depends on the format of the data records. Before accessing the data base creation system, documentation officer will have to collect the data in a work sheet which should be suitable for conversion into machine readable format. The data selection procedure for SDI data base must be scanning, understanding the various facets and purpose of article of a periodical, summary and abstract of articles, etc. The TAMIL/SDI system deals with articles and bibliographic information of periodical literature and its processing can be daily and also with a monthly publication service. The main data base system consists of an input module, data verification and updating modules.

(b) (i) *Input Module*

It enables to create a data base with the data available in the work-sheet. Thus the data available in a hard copy is converted to a machine readable form stored in a magnetic media. As the entire system is menu driven in nature the operator can select any of the appropriate files for data entry by typing the file number. During the course of data entry the operator is guided by suitable messages and it eliminates the wrong entry of data. The TAMIL/SDI data base system consists of the following data files.

1. *Index File*

This data file stores the relevant information pertaining to an article from the periodical on a floppy or a magnetic disk. To aid the searching strategy the data file is organized in a random fashion. Each computer based library information system may prefer its own format to specify the

record structure suitable for its computing resource. Though uniformity of data structures in computerised information system has been emphasised by UNIMARC, there still exists various formats in the world. The data entry format followed in TAMIL/SDI is flexible and can be easily adopted for any standard format. The record format of the index file is specified as follows.

Index File : Record format

Author's Name	Title	Journal Code	Volume #	Date of Pub	Pagina- tion	Sub code
*<--30-->	<--40-->	<--5-->	<--5-->	<--15-->	<--10-->	<5>

*Numbers represent the field width in characters.

2. Periodicals File

This file contains the list of names of periodicals. In order to avoid the duplication of names of periodicals in the Index file records, they are codified and the entries in the index file is referred by a periodical code. While printing the report it is necessary to convert the periodical code to the periodical name and the periodicals file is utilised for that purpose.

Periodicals File : Record Format

Periodicals name
<----- 50 Characters ----->

3. Profiles Heading File

It is nothing but a Thesaurus containing the list of key words or subject names arranged in a pre-defined logical order according to any scheme of library classification. The list will have to be prepared keeping in view the logical coherence of the profile headings. The subject code stored in the index file is deciphered using this file while generating the report.

Profiles Heading Files : Record Format

Subject name
<----- 50 Character's ----->

4. Researcher's File

Before invoking the operations of the SDI system it is essential to verify and update the entries of researcher's file every month, since the parameters of a researcher such as address and his research profile may

change. The researcher's file contains name of the researcher, designation, address and his profile codes. In the normal mode of data base creation upto 10 profile codes per user is allowed, and if the researcher wants to have more profile codes matched to generate SDI reports he can request it through a data file called profile enhancement file. Profile codes act as search keys during the information analysis of SDI system.

Researcher's File : Record Format

Researcher's name	Designation	Address	Profile's codes
<---30 Chars--->	<---25--->	<---60--->	<---50--->

As already explained, the SDI system is more interactive and menu driven, the data entry to the above mentioned files are done in the form of question answering system. Data bases are created in a separate floppy disc every month for accumulation and cumulative reporting at the year end.

(b)(ii) *Data Verification and Validation*

The data files explained above should be verified and validated for its correctness before the actual processing of SDI starts. Updating of information in the data base will become essential in times when the user requests to change his interest profile or due to wrong data entry, or due to the changes in the parameter of the existing data base. More effective and efficient methods are provided for updating the incorrect information in the data base.

I. (c) *SDI Query Report System*

This module of the SDI system is considered to be the nucleus of the system, since the profiles of each user is matched with the keyword entry of the data base when this module is activated. The query report system is more interactive to facilitate the easy handling of the system. This module can be operated either in the 'on-line' mode or in 'batch mode'. While operating it in the batch mode the user does not have any control over the system and it automatically reads one record at a time from the researcher's file and matches the user profiles with data base to generate the reports, whereas in the 'on line' mode of operation the user can specify the researcher's code to generate individual SDI reports. The SDI query report system can further be divided as profile matching report and profile enhancement reports either in 'on-line' or in 'batch mode' of operation.

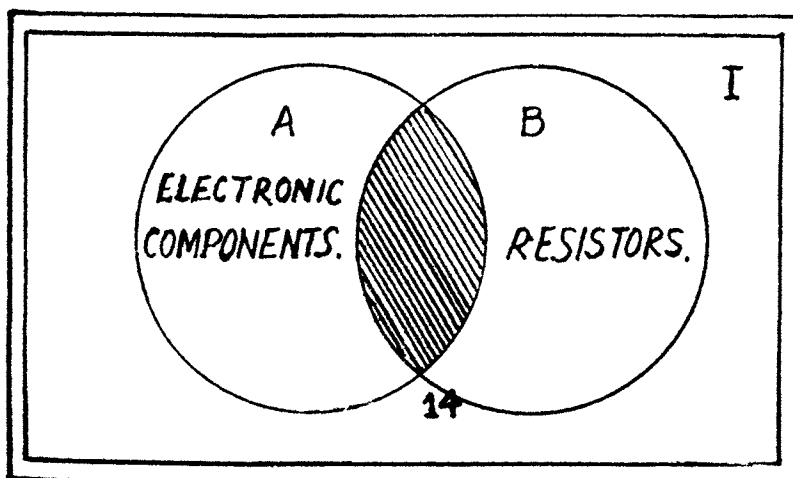
While operating the profile matching system the allotted profile codes are read from the researcher's file and matched against the entries in the data base with a suitable search strategy. When it is invoked in a 'batch

mode' a scientist or an engineer or other professionals can receive a print out of references to documents matching his interest profiles that have been added to a particular data base. The user is provided with an option to specify the device on which the output report is needed. In the case of profile matching report under batch mode of operation the report of individual researcher is printed out with mailing address after matching his profile of interest. The 'on-line' mode of operation facilitates the access for the SDI report of an individual researcher.

It is likely that some researchers may like to request SDI report on more profile headings than the allotted number of profile headings. In such cases their individual request will be treated as an enhancement report and the profile codes will be stored in an appropriate data base for profile matching.

The researcher's interest profiles will be normally represented by using the logical operators such as AND, OR, NOT etc. The venn diagram and logical operator can also be used to explain the profile representation. This will provide the nature of field and its relation or deviation of the interest profiles.

Let us denote the SDI data base by a rectangle I. For a particular request like an article of electronic components and resistors, class-A denotes the component and class-B denotes the resistor. The above profile request is represented graphically as follows using the ANDing logic *i.e.*, the overlap of two classes is called as the product or intersection of classes. The request is identified as the bibliographic details of articles which deals with components and resistors. That is the request is neither the profile dealing with the components alone nor resistors alone but it is both dealing with the subjects.



Electronic components AND Resistors :—

$$A \text{ AND } B \quad \text{====>} \quad A \cap B \quad \text{====>} \quad A \times B$$

In case of request with alternatives or substitutes the relation can be mathematically represented using a 'OR' logic as, $A \text{ OR } B \text{====>} A \cup B \text{====>} A + B$.

A typical user request specifying his profile of interest will be as follows :—

(Physics OR Electronics OR Material science NOT Radio Engineering) AND (Modern Physics OR Quantum Physics), i.e., (E1 OR E2 OR E3 NOT E4) AND (E5 OR E6).

I. (d) *Publication Processing System*

In addition to the matching of the user interest profiles and generating SDI reports the TAMIL/SDI has a provision to generate a monthly bibliographical report. This report contains subjectwise entries of bibliographic information. This part of the system enables the computer to prepare automatically a monthly indexing of periodicals with a main body of entries arranged according to a pre-defined and classified order within which the sub-entries are alphabetized by the author's name. Each entry of the bibliographic report is assigned with a unique serial number for locating each entry with the help of indexes following the bibliographical report. Provision is also made to accumulate the monthly data base to prepare an annual subjectwise bibliographic report besides monthly publication reports of bibliographies.

I. (e) *Indexing System*

When a publication system generates a subjectwise bibliographic report it is essential to have suitable indexes of author and subject for locating the specific entry in the report with an author or subject search. A separate module is available to generate the indexes of the reports. Also the output system is designed to provide an option for the user to specify the devices for generating the reports.

The TAMIL/SDI is being currently used for aiding the researchers in the fields of Tamil Language study and research. The same system without any major modifications could be used to serve in various fields such as Science, Engineering, Medicine and Humanities irrespective of the languages in which the literatures are available when they are transliterated into Roman scripts.

II. *TAMIL/MARC System*

The TAMIL/MARC can be considered to be a by-product of TAMIL/SDI. While the information storage and retrieval concerned with articles appearing in periodicals is the main focus of TAMIL/SDI, TAMIL/MARC deals with information regarding books and non book materials. The TAMIL/MARC is another Library information system designed for automatic cataloguing purpose. The main objective of the MARC system is to store bibliographic information in the machine readable form to create data bases of different type and different collections such as books rare manuscripts and palm leaf manuscripts etc. Searching the data base either in 'on line' or 'off line' with author, title and subject as search keys and retrieving bibliographic information is considered to be another application of the MARC system.

TAMIL/MARC system is modularised as follows :—

- (a) Main Module.
- (b) Data base creation system.
 - (i) Input system.
 - (ii) Data record verification and validation.
 - (iii) Updating system.
- (c) MARC on line query report system.
- (d) Publication processing system.
- (e) Indexing system.

The function of the main module and data base system is same as that of the TAMIL/SDI system except that MARC system makes use of catalogue and subject heading files.

Catalogue File : Record Format

Author	Title	Imprint	Accession/Call#	Sub-head code
< -30 ->	< -40 ->	< -50 ->	< -10 ->	< -5 ->

The major function of the MARC query system is that it interactively queries the user for search keys and searches in the main data base with the search key and retrieves the bibliographic information available in the machine readable form. The sub entries will be automatically alphabetized with author and title. The user can type author's name, as keys or title or subject code as the search key and the query system matches these keys with a data base and retrieves the bibliographic information to present the report in a predetermined sequence. The variant forms of names of personal authors can be matched with the data base entries by specifying the keys using logic notations like AND, OR.

The publication processing system of MARC generates the computerised catalogues from the bibliographic information stored in a machine readable form. It also utilizes the data base containing the subject names arranged in a logical order while printing the report. Apart from printing of subjectwise catalogues of books it is also possible to generate cataloguing reports of books for a specified publisher, place, year and language.

Bibliometrical Facilities Provided in TAMIL/MARC

The TAMIL/MARC system can also provide the following statistics pertaining to the coverage of periods of its publication :—

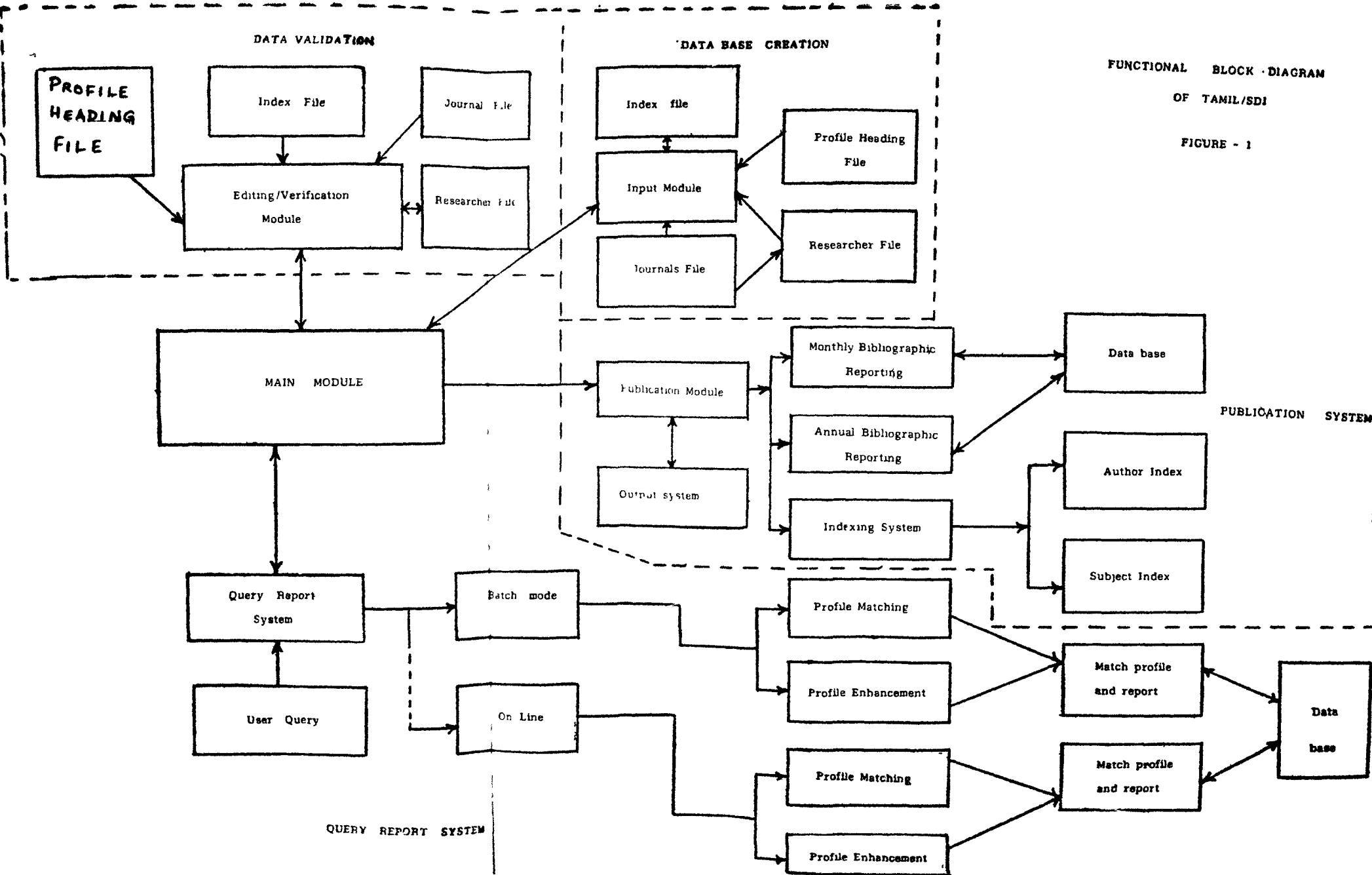
- (i) Number of books published in each subject.
- (ii) Number of books written by a particular author.
- (iii) Number of books published by a particular publisher.
- (iv) Number of books published from a particular place of publication.
- (v) Number of books published in a particular language.

Any desired computation among the above statistics is also possible.

Conclusion

So far the paper discussed the functional organization and the activities of the different modules of the TAMIL/SDI and TAMIL/MARC systems. Irrespective of the languages and fields of interest both the systems can be utilised to create data bases for various other fields and to retrieve the necessary information. The system is more flexible in the sense that a particular portion of the data bases can be suitably altered for tailor making the system to use in other fields. Both TAMIL/MARC and TAMIL/SDI systems can run on any microprocessor based computer systems with a main memory of 64 K bytes and an operating system compatible with CP/M.

Now there are different commercial data bases available and are used even on a weekly and monthly intervals of time. Since each data base has its unique data format, some of the present computer aided information centres depending upon information retrieval softwares developed by foreign countries face the problems of incompatibility. Just by observing a test tape format of a particular commercial data base, easy modification of TAMIL/SDI and TAMIL/MARC can be made to have compatibility with any other commercial data bases.



FUNCTIONAL BLOCK DIAGRAM
OF TAMIL/SDI

FIGURE - 1

**APPLICATION OF MODERN TECHNOLOGY FOR THE
CONTROL AND DEVELOPMENT OF BIBLIOGRAPHIC DATA
WITH SPECIAL REFERENCE TO INDIA'S NATIONAL
LIBRARY : ITS DREAM AND REALITY.**

UMA MAJUMDER
National Library, Calcutta.

Introduction

The modern technological revolution has a great impact on the modern management of library and information science. It has opened a new horizon before the librarians and information scientists to reassess, re-examine and review the rapidly changing concept for handling and generating the bibliographic data. "Libraries are the keepers of our history and culture. But they are not merely store-houses for the relics of the past but meeting places for people and ideas". Each and every society depends on the communication of ever-increasing knowledge for their very existence. This information must flow smoothly, speedily and accurately not only in its own society but for other societies of the world and for future generation. Now-a-days, library has been regarded as an important communicating medium between the society or community and national services, between the knowledge (in raw form or processed) and the users. In this context, by the very nature of its collections and history of service, the national library has the right to transform itself as an apex body playing a vital role as a centre for the dissemination of knowledge and as the component of the nation's rapidly evolving communication and information exchange network. Within each country, the national library, the "important phenomenon of librarianship" occupies a unique position in regard to the collection and preservation of the intellectual achievements of its own and other countries for posterity and should serve as a bridge for national and international co-operation and understanding. It is the responsibility of the national library to obtain information on all subjects that may be relevant to the need of the nation. This (information) includes what has been written, where it has been published, in what form and how it can be obtained. In short, the national library exists as an interface between the universe of bibliographic resources and the user population.

At present, one of the most pressing problems before the national library is : how to organise and control this increasing bibliographic data. The reasons associated with this problem are as follows :

1. Secular growth of recorded information

The advent of printing technology, the world's printed production has reached gigantic proportions and has continued to increase annually. The

growth of this phenomena has posed several problems before the national library in regard to acquisition, storing and processing.

2. *Economic constraints*

Owing to economic constraints, maintenance of maximum completeness of acquisition of printed works becomes complicated.

3. *The growth of various forms of documents*

Eg. standards, theses, patents, etc.

4. *The documents published in different languages*

The different languages publication become an important barrier for smooth flow of information between the different nations of the world. For example, in India alone, there are fifteen languages officially recognised. The processing of all these language publications into one standard transliterated and alphabetic form is a great problem faced by the librarians.

5. *Problems associated with the effectiveness of card catalogue*

Some important problems regarding the question of effectiveness of card catalogue as finding tools are :

- (a) high cost of changing and maintenance of record ;
- (b) the ability of the user to find out easily his relevant material from the large catalogue file ;
- (c) problem related to the physical durability and security ;
- (d) requirement of large space ;
- (e) probability of misfiling ; and
- (f) problem related to the changing rules of entry and modified and new subject headings.

6. *Ever-increasing number of users and their easy accessibility to the universe of bibliographic data*

The reasons enumerated above have significantly influenced the requirements of the scope and direction of changes of our (India) traditional ways of bibliographic development and control. There is no doubt that the requirements in India are not simply to change the form of the card catalogue or the technology by which it has been created and maintained, but to begin and build an essentially new and more responsive bibliographic system or systems by modern technology.

To overcome above mentioned problems, the effective bibliographic control is essential. According to Herman H. Fussler and Karl Kocher "bibliographic control" is limited to that sector of the bibliographic apparatus

that is created and maintained by libraries : (1) to assist the library user in identification of and access to, potentially relevant materials and (2) to support effectively those library operations and services that are related to bibliographic data.

Several national and international conferences and seminars were held to assess and examine the current state of bibliographic control ; variables that remarkably influenced the evolution of bibliographic control in the future ; current capabilities in relation to fundamental principle ; available alternatives and their consequences. Among these initiatives, the most important was the establishment of International Office for Universal Bibliographic Control by IFLA. This office began its operation in July 1974 and its main objective is "the promotion of a worldwide system for the control and exchange of bibliographic information". The concept of Universal Bibliographic Control (UBC) presupposes the creation of national as well as international network. To implement its objectives, IFLA office for Universal Bibliographic Control, formulated the standard requirement (*i.e.*, internationally accepted form) for codifying bibliographic data which can universally and promptly allow access by international as well as national units. These standards can be used both by manual and mechanised systems.

There is no doubt that the primary essential function of the national library is to collect and preserve the nation's cultural output by means of legal deposit or other ways. These deposited copies furnish a proper base for developing information on national printed output, national bibliography and central cataloguing resources for its country's libraries. It is true that large amount of professional time is wasted in duplication of cataloguing effort in hundreds of libraries. This duplication of effort is unnecessary and can be avoided if all documents are catalogued once in a standardised format. Moreover, no country today can be self-sufficient in regard to the comprehensiveness of stock, which calls for centralised, standardised and co-ordinated library activities, both within the country as well as on an international scale. This centralised cataloguing function of the national library was recommended by the Vienna Symposium (1958) and also included in one of the fundamental recommendations of IFLA, National and University Library Section at Helsinki. In short, centralised cataloguing system involves "the creation of a central authority which assumes responsibility for the cataloguing and classification of material and which then makes this cataloguing information available to any library which may require it." One of the outstanding examples of this system is the "National Union Catalogue" compiled by the Library of Congress which began its centralised cataloguing operation in 1901. Another example is British National Bibliography and BLAISE (British Library Automated Information Service). In the U. K., the centralised bibliographic

service has been obtained by the formation of the Bibliographic Services Division in 1974 within the British Library.

Let us look at the Indian scene. In the absence of centralised cataloguing, the same book is being catalogued by number of the libraries in India. This involves duplication of work and misuse of manpower. There is no doubt, the National Library, Calcutta, the biggest library system in the country, follows and maintains international standard to process its books procured under the Delivery of Books (Public Libraries) Act, 1954 (D. B. Act), purchase, gift and exchange. But they are processed by various Divisions, *i.e.*, English Processing, Indian Official Documents, Foreign Official Documents, Indian Languages Divisions, Afro-Asians as well as European Languages (Except English) Division. The standard and uniformity among all these Divisions regarding the processing of books is a problem that is to be overcome.

One of the important duties of the National Library is to process reading materials without much delay and to make them ready for reference as early as possible. It is true that all libraries (even the Library of Congress) have the backlog for processing and India's National Library also suffers from the same problem. It is evident from its Annual Report, let us take the 1982-83 issue, the National Library has a considerable amount of backlog, *i.e.*, during the year 1982-83 the Library received 53112 publications, among these only 26451 could be processed. With the advent of computer technology, the processing of books can be done quickly, efficiently and on a large scale.

In regard to the world output of knowledge production, UNESCO's recent statistics reveals that India occupies the seventh position and in regard to the production of English book, it takes the third place after the United States and the United Kingdom. No data is available regarding the time-lag involved between the receipt of books by the National Library under the D. B. Act and their availability on shelves but it is evident that after the acknowledgement of receipt of D. B. Act books, the National Library sends these books to the Central Reference Library (CRL) which returns the books only after processing these books for the INB (Indian National Bibliography). After the receipt of the books from the Central Reference Library, the English Processing, Indian Languages, Afro-Asian Languages and Indian Official Documents Divisions process those books. This long process indicates that a considerable number of days is involved in processing a book from its arrival in the library and its availability on the shelves for the users. This process also indicates that the same book has been processed separately by the National Library for its own catalogue and the Central Reference Library for inclusion in the Indian National Bibliography (INB). In order to avoid this wasteful duplication of effort

and ensure standards and uniformity in bibliographic services as well as for the reason of economy and better bibliographic control, some arrangement should be worked out for centralised cataloguing and other bibliographic services related to the needs of the National Library and the libraries and information communities of the country. There is no doubt that by centralising the creation of bibliographic data at national level, atleast three way benefits can be obtained by the National Library in India :

1. It will maintain a significant control over the nation's bibliographic output ;
2. It will take initiative and leadership to distribute printed standard catalogue cards among other libraries in the country.
3. It will gain cost benefit advantages (not only for the National Library, but for the nation as a whole).

It has already been mentioned that modern technology has a significant impact upon today's library system of the world. The bibliographic function of the libraries of the world has changed significantly and continued to do so especially due to the mechanisation of cataloguing and bibliographic information. The beneficial impact of libraries in regard to the management, information storage and retrieval, publishing facsimile transmission, conservation, etc., cannot be fully visualised without modern technology. Most libraries of the world have enhanced in their services by the introduction of uptodated modern technology.

The term "modern technology" is used to cover a variety of electronic, photographic, digital and image-handling technologies which are used to handle all sorts of information technology. Among these technologies the most important is computer technology. It receives widespread attention not only for bibliographic data processing, storing, transforming and retrieving but is also used to control all other technology-based information systems.

The second aspect of technology is related to the communication system which is essential for terminal-oriented system. It is treated as linkage mechanism for network operation geographically.

Another aspect of modern technology is reprography which is concerned with technologies and equipment for the reproduction of documents.

The rapid development of computer technology including its storage capacity and new communication technology are profoundly affecting the library services and the role of library managers. It is true that the computer does not solve all the problems inherent in the management of large store of knowledge but does relieve the librarian from many of the repetitive routines. That is why, the present day library managers are taking the

help of computer and related data processing device for better and enhanced control of bibliographic data. The main reasons behind the mechanisation of library system by computer can be summarised as follows :

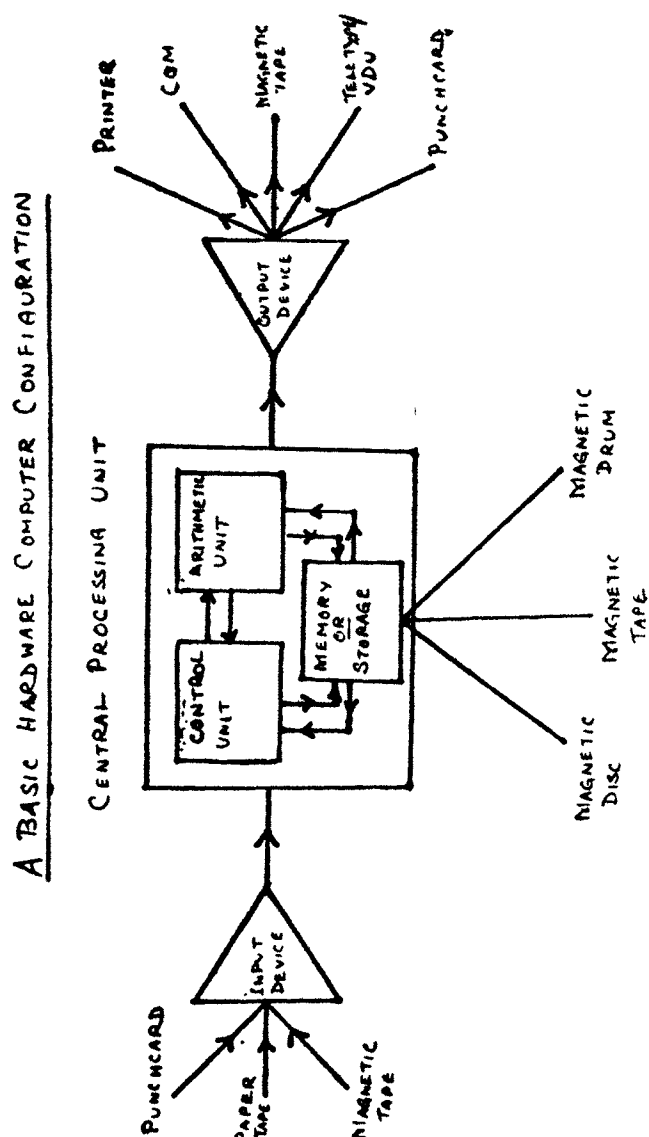
1. to improve productivity ;
2. to gain improved control over ever-increasing work load ;
3. to improve speed and avoid duplication of work ;
4. to reduce error ;
5. to increase range and depth of services ;
6. to facilitate co-operation ;
7. to ensure efficient and accurate information retrieval operation ;
8. to reduce unit cost of operation ;
9. to get by products and fringe benefits ; and
10. to manage library operation with limited manpower.

The dramatic improvement in computer technology with its capacity, to save time, to deduce cost of information processing and storage, like other administrators, the librarians are inclined to promptly install the new technology, (*i.e.*, machine readable, computer processible form) in library and information centres for effective, enhanced and efficient services. The development and rapid advancement of computer technology in the 1970s had completely changed the information and bibliographic data processing environment. By the end of this decade, the card oriented computer devices had been changed to tape and disc oriented computer. This development has accelerated the way for the interactive systems which have emerged as the mainstream of processing technology. The time has come before the Indian librarians to evaluate the development of this modern technology and wherever possible utilise and apply this technology as well to educate librarians and users to help them to face this uncertain development of future library. It is essential that the librarian understands computer configuration and its terminology to communicate with the computer systems experts and to evaluate proposals for mechanisation. It will be worthwhile here to give a brief idea about the computer configuration.

Computer Configuration

Modern computer system has two components : hardware and software. The *hardware* is the machine which performs the actual operation. The hardware has three main devices : Input device, Central Processing Unit and Output device (See Plate No. 1). Input device is the means of transferring information (both instruction and data) into the computer system. Information is input into the computer either by means of a keyboard operated device or by transfer from another computer. For on-line system

teletype writer and visual display unit (VDU) are used as input and output device. For inputting information three kinds of media, *i.e.*, paper



tape, punch card and magnetic tape, are used. By these media, information is transferred to machine readable form. All these media, however, have advantages and disadvantages. Where the length of record varies and a wide range of character is required, papertape suits best while punch cards are preferred by the computer operator as they are much easier to edit. The main disadvantage of both the types is their bulkiness.

Magnetic tapes are faster ; economise the computer time but are more expensive.

Output device is the means by which computer system can communicate results to the searches. Besides magnetic tape, punch card and paper tape, information output can be obtained on lineprinter and Computer Output Microform (COM).

Central Processing Unit consists of three interrelated operating components : a Control Unit, an Arithmetic/Logic Unit and Storage/Memory Unit. The Control Unit directs the operation of the other sections. The Arithmetic/Logic Unit is responsible for actually doing it. The Memory Unit provides storage for data and programs with the CPU. The information store in memory is recorded in the encoded machine readable form. A unique coding form is designed to represent each of the characters to be recognised by the computer. In computer terminology a 'character' means any letter, numeral, punctuation mark or any other symbol required in data or software programme. At present various standardised coding scheme have been developed. Among them, the most widely used codes are . 1. ASCII (American Standard Code for Information Interchange), 2. EBCDIC (Extended Binary Coded Decimal Interchange Code). CPU memory is described as primary storage to distinguish it from secondary storage. As the primary storage is kept within the CPU, it can be accessed more quickly than the secondary storage. The primary and secondary storage capacity of a computer is measured by Byte and expressed as a number followed by the symbol 'K' or KB (Kilobyte). One KB stands for 1024 bytes. ASCII and EBCDIC codes employ symbol "1" to "0" to express the pattern of each character. Each of the symbols in the coded charts is called binary digit or bit. A series of bits (usually 8 bits) constitutes a unit called Byte. For example, a computer having 128 K of main memory storage means that it can store 128 times of 1024 bytes character. On the other hand, the capacity of secondary storage device is measured in millions of bytes or megabytes (MB).

Software

All computers need instructions in the handling of the data received. These instructions in computer terminology, are known as 'Programmes' or 'Software'. Programmes enable a computer to function and control its own operation, *i.e.*, it specifies how information should be re-arranged for machine storage ; how to sort and format the information to suit output specifications. The instructions are formulated by a sequence of operation commonly known as 'algorithm'. Each computer programme is based on one or more algorithm designed by the programmer to solve the problem at hand. When the algorithm has been completely formulated, it is the duty of the programmer to translate any natural language used (*e.g.*, English, French, etc.) to the machine's languages. Programming languages

may be divided into three types :

1. Machine language (Binary number) ;
2. Assembler language ;
3. High level language.

Now-a-days, computer programmers usually write instructions using assembler language or a high-level language. Some of the high-level languages are FORTRAN, PASCAL, COBOL, PL/1 and ALGOL.

Softwares are designed according to the need of the library. The selection of software is very important. It determines how well a library meets not only its current needs but also its future needs, specially in case of changing hardware or if the original software vendor discontinues its support.

Types of Computers

From physical/size, operational capacity (processing power) and price, the modern computer systems are categorised into three groups :

1. Main frame or full size.
2. Mini computer.
3. Microcomputer.

The main frame computers are designed as a large scale or medium scale to perform common scientific and data processing task. Their main memory capacity ranges are 4 to 32 million character and their speeds of operation are measured in fractions of a nanoseconds (*i.e.*, billionth of a second). They access 64 bit words.

The capacity of primary memory of minicomputer is 128,000 to 1 million character and the operating speed of the computer is measured in microsecond (*i.e.*, one millionth of a second) and it accesses 12 to 16 bit words.

Microcomputer is a complete computer processor manufactured on a single integrated circuit chip. Its primary memory capacity is 16,000 to 128,000 character and can access 8 bit words. Its operating speed is measured in milliseconds (one thousandth of a second). The system supports one terminal, one printer and a low capacity disc or tape storage device and is designed primarily for self-contained and desk-top operation.

Several reasons and problems of the bibliographic control have been enumerated in earlier paragraphs. Taking the cue, we find that in the early 1960s, librarians of the Western world were increasingly aware of the necessity and desirability of basic changes in bibliographic control. Since then a wide variety of changes are manifest in the western world in the process of bibliographic control through :

1. The establishment of national and international cataloguing rules and standard.

2. New or modified concepts for creating or formatting, exchanging and using bibliographic data on both, domestic and international basis
3. The development of computer based and related technological systems or capabilities for providing access and transfer of bibliographic data.

To control and develop bibliographic data by mechanisation or adoption of modern technology, one should critically examine the following questions :

1. How effective will the new system be in terms of users requirement ?
2. How far will the library be able to access directly to the nation's as well as world's literature and information by modern technology ?
3. How far easily, quickly and effectively will the new or changing technology be able to communicate, store and manipulate the bibliographic data ?
4. How far it will be capable of controlling national as well as international network ?

The fast improvement of modern technology, specially the computer technology and the resultant reduction in the cost of information processing and storage, helped many libraries of the world to mechanise their cataloguing and bibliographical services. In the mid-1960s machine-readable cataloguing (MARC) was developed and designed by the Library of Congress. But this first effort of MARC I was superseded by the MARC II, now commonly known as MARC. This new format of MARC was designed by the Library of Congress and the British Library. The main objective behind this change was to enable them to communicate a bibliographic description in machine-readable form in such a way that records could be reformatted for any conceivable purpose. Now MARC formats have been developed by the national libraries of Canada, France, Germany, Italy, Australia, Denmark, Sweden, Norway, Japan and Latin American countries. At present MARC formats are widely used by the automated libraries for the creation, transmission and re-creation and manipulation of cataloguing data.

Now let us turn to the application of modern technology in the National Library of India. Indian Librarians are fully aware of the advent of modern technology. They recognise the importance of these modern developed technique and their applications in libraries and information services to improve the quality and efficiency of their services. But the social and economic situation in India, a developing country, is very different from that of the developed countries. Mainly due to unemployment problem in India, computer has been introduced in a very limited scale for a few

services only, *e.g.*, banking, reservation in Airways, etc. Very recently, some of the national institutions such as *INSDOC*, *ICAR*, *DESIDOC*, *IIT* have introduced the modern technology for information system.

By introducing sophisticated reprographic machine and electronic typewriter, the National Library, Calcutta has entered into the modern technological world. Very recently the Central Reference Library has also started utilising the services of mono-computer based printing machine (*i.e.*, Monotype alphacomp phototypesetters) to solve their printing problem. Alphacomp is nothing but a computerised type machine with memory. By this modern machine, Central Reference Library has already realised how fast they can print their bibliographical data for the INB and eventually the monthly issues of INB are now published regularly since January, 1954.

In this paper only some suggestions are formulated in regard to the application of modern technology to control bibliographic data in the National Library, Calcutta. At present, number of options are available for mechanization of library operations specially in the field of bibliographic data or automated cataloguing. It is, therefore, essential to form a 'high power committee' to examine, design, implement and operate the plan for mechanization according to the requirement of the Library. This committee should consist of the library authority including Director, Librarian and other officials, computer scientists and some members from the staff side. 1, briefly, suggest some outlines about the functional activities of this committee.

The duties and responsibilities of this 'high power committee' may be categorised into three stages :

1. Consultation stage.
2. Implementation and Installation stage.
3. Operational stage.

1st or Consultation Stage

It is the first duty of the Committee to examine, assess and analyse carefully the areas of library operation for introducing computer applications. After assigning the area, the committee should design and plan the system according to the requirement of the Library. In this stage, it also includes the selection of suitable *software* or to devise a plan to create the required software which will accommodate the National Library System. After the selection or creation of software according to the need of the Library, the Committee should select *hardware*—a cost-effective machine for operation of the system. In this stage, the committee can seek some suggestions from other organisations which have already installed or introduced computer for library operation specially for bibliographic data control. For example, the assistance of *DESIDOC* (Defence Scientific Information and Documentation Centre) may be sought. It has already mechanised their

processing unit as well as the information retrieval system. This 'Consultation stage' is extremely important and the success of mechanisation of library operation rests on the proper consultation and planning.

2nd or Implementation and Installation Stage

In this stage, the committee will take up for complementation of computerisation programme in the Library. The operation of this stage may be done by the committee in the following two phases :

A. Adopt the System

Adoption, here, means to stabilize or to change the existing system or to create a new one so that operation on the computer will be possible. In this regard, my suggestion is to adopt or create the computerised bibliographic format which will fulfil not only the need of the nation, but will be compatible with the international standard.

B. Instal System on the Computer

In this phase, the library experts in consultation with computer experts will prepare bibliographic data as computer entry. After preparation, the data entry personnel will input the data into the computer. On the other hand the computer personnel will co-ordinate and ensure acceptability of data into the machine.

3rd or Operation Stage

This stage includes the following functions .

- (a) Test the system ;
- (b) Run the computerized system parallel with the manual ;
- (c) Operate the automated or computer system as an independent entity.

All these three stages . Consultation, Implementation and Operation must be carefully analysed to determine cost, time and personnel requirement plus any other factors (*i.e.*, building, electricity, etc.).

In this small paper it is not possible to go into the elaborate details of the above three stages. The first two stages, I hope to discuss in detail in future. Now, I present some of my suggestions in the operational stage in regard to the computerisation of bibliographic data of the National Library.

It is already mentioned that to avoid duplication of effort and ensure standard and uniformity in bibliographic services, as well as for reasons of economy, either the Central Reference Library may be merged with the National Library or any way out should be found out to form a Centralised Bibliographic Services Division within the National Library. This Division would be responsible for producing centralised cataloguing and other bibliographic services related to the need of the National Library and the library and information communities of the country. With this new

system, this Division would develop a comprehensive Indian Machine Readable Cataloguing (INMARC) network which should fulfil the need of the country and also compatible with international standard. This network should attempt to integrate the internal processing operations of the National Library with external services to the library community so that its cataloguing, classification, indexing activities generate records which can be used for any desired purpose. Regarding the cataloguing rules, it should be better to adopt Anglo-American Cataloguing Rules, second edition (AACR2) for the implementation of quality standard which will facilitate easy exchange of Indian MARC format with other libraries of the world.

In computerised cataloguing system, the facility of subject access is very important and essential. For assigning subject headings, most of the libraries of the world, depend upon the two American list of subject headings, *i.e.*, Library of Congress List of Subject Headings (LCSH) and Sears List of Subject Headings. With the advent of automated bibliographic data, a number of initiatives have been taken by the librarians and information scientists to automate indexing, specially in regard to the subject approach. Among them, in the United Kingdom, most widely used automated subject index is PRECIS (Preserved Context Index System), devised by Derek Austin. Though it is a new technique of subject access and indexing, it is hybrid and based mostly on the so-called chain indexing system. For example, subject strings by PRECIS of a book entitled "Employment policy in developing countries : a case study of India" will be as follows :

- | | | |
|----|---|---------------|
| 1. | Developing countries | 909.097240828 |
| | Employment. Policies of governments —Study | |
| | Regions : India (Republic) | 331.12'5'0954 |
| 2. | Employment. Developing countries | |
| | Policies of governments—Study Regions : India | |
| | (Republic) | 331.12'5'0954 |
| 3. | India (Republic) | |
| | Developing countries. Employment. Policies | |
| | of governments | 331.12'5'0954 |
| 4. | Policies. Government. Developing countries | |
| | On employment—Study Regions : India | |
| | (Republic) | 331.12'5'0954 |

File structure or access techniques to the data base is very important in the automated cataloguing. In regard to the filing by computer, different practices are prevailing and operating in library field depending on the degree of feasibility and desirability of the library to satisfy a variety of needs. For example, the British Library has developed its own filing rules which is closely related with the practice of Library of Congress filing rules.

On the other hand, a separate set of filing rules has been devised by the North American libraries.

During the last 20 years, technological developments have made profound effect on the economics of creating and distributing bibliographic records. But the lack of compatibility, in regard to the standard, has become a major hinderance to the development of integrated bibliographic system and distributing of bibliographic data. Again, though MARC format was designed to be international, some national MARC format have made some variations. So the UNIMARC was developed by the IFLA Committee on Cataloguing and Mechanization with joint sponsorship with the IFLA Working Group on Content Designators to overcome varying national practice and facilitate the exchange of bibliographic records among the national agencies.

The machine readable bibliographic database, created by the national agencies in western countries, is usually centrally stored and maintained. As huge capital investment is required for the development of computer-based system, some countries have taken the opportunity to create the machine-readable bibliographic database by co-operative venture. This centralised machine-readable bibliographic database has become an important basic source tool of library operations and it can be consulted from a distance and data or entry can be copied to and from a distance by input and output device.

MARC System

It will be worthwhile here to describe MARC system briefly.

MARC record is a tagged record. In this system, a 3-digit number is used for tag (label) instead of a character, e.g., tag 245 always indicates the title field. The record of MARC II format consists of four components.

1. *Leader*

This provides standard information, such as the length of record, status of record [new, changed, detailed, cataloguing-in-publication (CIP) etc.].

2. *Directory*

This indicates the length and starting character position of each field. For example :

100002500135

Tag 3 character

Length of data infield 4 character.

Starting character position 5 character.

Explanation

Field with tag 100 means personal author which is 25 characters long and starts at 135th character position.

3. Control Fields

In these fields, tags 001-008 are assigned as character string by which the computer identifies the particular record within its storage. Usually some unique numbers are provided for each record in a given database. This unique number is also used as a linking entry. For example, ISBN, Library of Congress Number, BNB Number, etc.

4. Variable Fields

These fields contain all bibliographic information in record. Each field starts with two numeric indicators and ends with a special mark. In UKMARC “#” this sign is treated as truncated mark. Again each field is extended by Indicator and Sub-fields marks. Eg., Tag 260 stands for Imprint.

Tag	Indicator	Subfield Code	Defination
260	00		Publisher not main entry heading.
	10		Publisher main entry heading.
		\$a	Place.
		\$b	Publisher.
		\$c	Data.
		\$d	Full address information.

Example

Book entitled “Introduction to automation for librarians, by William Saffady Published by A. L. A., Chicago, 1983” will be entered into MARC tag as follows :

260 00 \$a Chicago \$b ALA \$c 1983 #

The chief tags of MARC format are :

001-008	Control Field
050	L. C. Classification Number
080	U. D. C. Classification Number
082	Dewey Decimal Classification Number
100	Personal Author main entry heading
110	Corporate Name
240	Uniform Title
245	Title & Statement of responsibility
250	Edition and Statement of responsibility

260	Imprint
300	Collation
400	Series Statement
500	Notes
600	Subject Headings
700	Added Entries
800-840	Series Added Entries
900	References

Appendix 1 and 2 contains MARC work sheet and the British Library MARC work sheet.

In brief MARC system is enumerated above. Though the experiences in western countries show that by computer-based machine readable system bibliographic processing could be simplified, faster and less costly but for India if computer is introduced for cataloguing, it will be better not to eliminate the manual cataloguing system entirely. It is suggested that the "parallel-system" is better for India's National Library. In this system, both the machine readable computer processible form and manual processing will go hand in hand or simultaneously until the staff are confident and efficient to work with modern mechanised system and the new mechanised system works efficiently.

Any Control Number or ISBN (International Standard Book Number) is essential for computerised cataloguing system. By this number, in machine, record of books can be identified and accessible easily and quickly. It is encouraging that the Ministry of Education, Govt. of India, has taken initiative by establishing an agency to assign ISBN for Indian publications. Yet most Indian publications do not bear any Control Number or ISBN. For better international as well as national network for exchanging of MARC format and tape, ISBN scheme should quickly be developed and at the time of publishing each Indian book should contain ISBN.

For efficient and quick flow of information for bibliographic control, another programme—Cataloguing-in-Publication (CIP) which is absent in Indian scene, may be developed. In 1958-59, the Library of Congress attempted to establish 'cataloguing-in-source' but the programme did not come into operation. In 1971, the 'cataloguing-in-source' was reborn with new name as 'Cataloguing-in-Publication' (CIP). It is evident that owing to the lacuna of the Delivery of Books Act, the Indian publishers delay in depositing newly published books at the National Library under the D. B. Act. This delay in depositing

Indian publications by Indian publishers is another cause that will very much effect the uptodateness of the entries in the Indian National Bibliography. This problem can be solved by launching CIP Programme in India. It is true that the success of this programme is largely dependent upon the publishers. The object of this programme is to provide advance information about forthcoming Indian publications. In all countries where CIP Programmes are in operation, the publishers supply the draft preliminary matters (for example, title page, introduction, contents, etc.) from which CIP records are created. Introduction of CIP Programme will permit fast cataloguing of most materials. The value of CIP Programme has now been well recognised by the librarians and publishers of the world. IFLA International Office for Universal Bibliographic Control organised one international meeting on CIP in 1982 at Ottawa. According to this meeting, at present, CIP Programme has been operated in nearly twenty countries and this meeting also recommended some guidelines for international standards of CIP Programme including the content of records and operating procedures for CIP. Introducing this programme, the currency and coverage of INB and Indian MARC will be improved.

For input and storage of the bibliographical data of Indian language publications into the machine readable cataloguing, the Indian librarians will face some problems regarding the diacritical mark. Actually machine does not accept all forms of diacritical marks. For the sake of machine operation, Indian librarians could take some guidelines from American system for inputting diacritical marks in MARC format. Library of Congress in its Processing Department's quarterly journal, *i.e.*, Cataloguing Service Bulletins 118-120 (1976-77) has already published one transliteration scheme which is widely used in the automated libraries. This scheme contains some exceptions in transliteration form from INB's transliteration practice. For example :

Alphabet	Library of Congress	INB	Computerised transliteration	
ड	ṛa	da	गुड़ि	Ghuri
ढ	ṛha	dha	राही	Raṛhi
व	b	va	बा ी	Barī
श	Sh	a	कृष्ण	Kṛshna

These changes in diacritical marks are introduced by the Library of Congress for making easy the input of non-Roman citation into machine. For easy input of diacritical mark into machine, three alternatives are suggested :

1. The diacritical mark may be placed immediately following the character.

Eg. König will become Konig.

2. The character plus diacritic combination to its equivalent may be made simpler by transliteration, e.g., Max Müller will become Max Mueller.
3. All diacritical marks may be avoided.

The first alternative looks very strange in the bibliographic citation and this system is not easy for users to have access to bibliographical data base. The second alternative is better but users must know the form of transliteration because there can be conflict between the language of the original and the transliterated version. The 3rd alternative is not applicable in Indian languages publications. Regarding transliteration, it is suggested that a "Committee" may be formed to establish consistency and uniformity between the human and machine readable languages for input bibliographic data into machine.

Replacing card catalogue by machine readable form, the large library, like the National Library, Calcutta, will face some problems with old unconverted records. The conversion of old records into machine readable form is very labour intensive and costly. Three alternative ways are suggested. :

1. The present card catalogue may be frozen or closed and machine-readable form may be built up. Closing the card catalogue means that after some predetermined date no additional records will be entered into the card catalogue. For example, at the University of Sheffield, Library, the card catalogue had been closed since 1977 and 1978 onwards microfiche catalogues are available.
2. Machine readable record may be created for all items.
3. Machine readable records available in market may be purchased, e.g., Machine readable catalogues for old materials are created by Online Computer Library Centre (OCLC), Research Libraries Information Network (RLIN), British Library, Washington Library Network, etc.

For automated cataloguing, it is better for the National Library, Calcutta to freeze card catalogue and build up machine readable catalogue for new titles. When finance and skilled labour are available, machine readable catalogue for old records will be created.

Several guidelines are formulated for effective control of bibliographic data available in India by modern technology. There is no doubt that the

application of modern technology for bibliographic data control in India will involve certain uncertainty and confusion. There has been a flood of conferences, seminars and workshops on the control of bibliographic data by modern technology all over the world. The limitation and problems associated with the machine are gradually being overcome. Computerisation is not an end. It is a means by which both qualitative and quantitative improvement of the library services can be achieved. Of course, it requires planning, control and most of all, training to permit the integration for library services into the fabric of society's future. We, the Indian librarians must work together under one umbrella, *i.e.*, the National Library, to build up a computer-based centralised integrated system. I am very much hopeful that from this Seminar we will formulate some guidelines to control bibliographic data by modern technology in India.

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APPENDIX 1

EXAMPLE OF MARC INPUT FORM (MONOGRAPH)

TITLE PAGE

THE BASICS OF INFORMATION SKILLS TEACHING

IAN MALLEY

CLIVE BINGLEY LONDON

VERSO OF TITLE PAGE—

©IAN MALLEY 1984. PUBLISHED BY CLIVE BINGLEY LIMITED, 7, RIDG MOUNT STREET, LONDON WC1E 7 AE, AND PRINTED IN ENGLAND BY REDWOOD BURN LIMITED, TROWBRIDGE, WILTSHIRE. ALL RIGHTS RESERVED. NO PART OF THIS PUBLICATION MAY BE PHOTOCOPIED ECORDED OR OTHERWISE REPRODUCED,STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM OR BY ANY ELECTRONIC MEANS WITHOUT THE PRIOR PERMISSION OF THE COPYRIGHT AND PUBLISHER. FIRST PUBLISHED 1984.

BRITISH LIBRARY CATALOGUING IN PUBLICATION DATA
ISBN 085157 3789

TYPESET BY ALL SET IN 11 ON 12 POINT BASKERVILLE, 123458887868584

MARC INPUT FORM (MONOGRAPH)
(BASED ON UK MARC MANUAL, 2nd edition 1980)

AREA	TAG USED	
CONTROL NUMBER	001	
INFORMATION CODES	008	(02) 5 1984 (06) en \$c \$d . \$e \$f \$g \$h \$i \$j \$k (01) eng \$m \$n (04) w#
ISBN NUMBER	021.10	\$a 08515737 89#
DEWEY DECIMAL CLASS NUMBER (LATEST)	082.00	\$a 025 \$c 19#
MAIN ENTRY	100.10 110 111	\$a Mallory \$h 9an#
TITLE	245 10	\$a The basics of information skills teaching \$d 9an Mallory#
EDITION	250	
IMPRINT	260.00	\$a London \$b Clive Bingley \$c 1984#
PHYSICAL DESCRIPTION	300.00	\$a 150p \$b ill \$c 22cm#
PRICE FIELD	350 00	\$a £ 8.75 CIP entry#
SERIES	440 - 490	
NOTES	500 - 504.00	\$a Index#
SUBJECT HEADINGS	650 00	\$a Information storage and retrieval systems \$x Study and teaching#
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APPENDIX 2: BRITISH LIBRARY CATALOGUING INPUT DATA

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4XX/8XX	
(4901)	Occasional papers for 0261-5428 for 1 #
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APPLICATION OF MODERN LIBRARY TECHNOLOGY FOR
CURRENT BIBLIOGRAPHIC CONTROL WITH SPECIAL
REFERENCE TO THE INDIAN NATIONAL
BIBLIOGRAPHY.

HARINDER KAUR
Assistant Editor,
Central Reference Library.

According to J. S. Sharma "The tradition of bibliographical control in India is as remote in the past as one can see". The historical genesis of bibliographic control in India can be traced back to the Press and Registration of Books Act in 1867. In the post-independence period, the Delivery of Books (Public Libraries) Act, 1954 aimed to have bibliographical control on current books published in India in all the major languages. By this Act, effort has been made to have every thing published in India collected at a central place, which is the prerequisite for the compilation of the national bibliography.

(1) *Role of UNESCO and the development of Universal Bibliographic Control*

The universal approach to the recording of information was taken up by UNESCO. The concept of Universal Bibliographic Control proposed the establishment of an international network of bibliographic agencies for the control and exchange of bibliographic data, which should be internationally accepted. In this respect, UNESCO has adopted the policy of indirect action, preferring to stimulate action at the national level. This international network is made up of component national parts, all integrated at the national level to form the total system. At the national level, it is the duty of the national bibliographic centre to make bibliographic record of each new publication, to co-operate with its counterparts in other countries and immediately make available throughout the world its bibliographic record of publications. This is the basic idea behind a bibliographic network concept, to be achieved first at the national level and then at the international level.

(2) *Bibliographic Control in India*

An important way of exercising bibliographic control of current literature in any country is through the regular publication of the national bibliography. Bibliographic record of each new publication should be made as it is issued and subsequently publish those records with the shortest possible delay in a national bibliography which should appear regularly. The Indian National Bibliography (INB) is based on the National Library's receipt of all types of published material by legal deposit. The complete and comprehensive coverage of the INB depends on the efficient functioning of the legal deposit act, i.e. the Delivery of Books Act. When the INB first started

in 1958, it was felt that it would serve librarians as a guide to selection and acquisition, be of value to booksellers and publishers and facilitate selection of information for scholars. However, as time has shown the initial enthusiasm and expectations of the users and of the library professionals has been belied by the belated appearances of this important national project.

The usefulness of a national bibliography depends on its currency by which it can serve as a book selection tool. If a national bibliography cannot be up-to-date, it just becomes a partial and retrospective guide to the published material of its country. Right from its inception, the INB has unfortunately been trailing behind its schedule. In the first place, deposit of books by publishers in India is not prompt or regular and due to the printing problems faced by the INB, books may be included in it only after several years of its publication date. This is a sad contrast to the British National Bibliography, where publications are announced in advance through the cataloguing-in-publication (CIP) programme. Again, the functioning of the Delivery of Books Act has not been effective and not all books are deposited, which means that the INB coverage of the Indian literature is partial.

(3) *Role of automation in major national bibliographies*

Most of the success of the world's top national bibliographies in respect of frequency and accuracy can be attributed to the use of computers, which release the bibliographer from the house-keeping drudgeries. The British, Australian, French, German and South African national bibliographies resort to automation for timely publication. Among the Asian nations, Singapore has set up a national network known as the *Singapore-based integrated library automation system* (SILAS), which is expected to provide national union catalogues, catalogues in print, magnetic tape or COM fiche form for individual libraries. National Bibliography is also included in this scheme of automation.

The impact of the computer on library techniques has been so great that it has become the catalyst that has drawn the international library community together and has prepared it to accept compromises in national cataloguing traditions in order to achieve international standards in bibliographic recording. The computer has opened up the prospect of an international communications system whereby bibliographic records can be speedily transferred from one country to another and made available in machine-readable form. This is called 'resource sharing', which is the foundation of Universal Bibliographic Control.

Printed bibliographies however, timely and qualitative they become, provide only half the answer to the problem of information dissemination which should be quick in the international context. For international

selection and acquisition, machine-readable tapes will best serve the purpose. There are already a number of national bibliographic agencies exchanging such tapes.

(4) Application of Automation to the Indian National Bibliography

While the western world is progressing so fast, the developing countries like India cannot for ever close their eyes to the necessity of the time. Modern technology should be applied on a large scale to the library work and service in India. Computerisation of the INB is inevitable, if India as the largest book producer in the developing world is to play its right role in achieving Universal Bibliographic Control. It is no use to bemoan the high cost of computer technology. The high cost is rapidly decreasing now. The computer is now almost universally accessible specially with the advent of microcomputers.

However, we may stress on the improvement of the national bibliography by manual means, it is very difficult to make it accurate and current without the use of the computers. Automation allows the rapid presentation of accurate and comprehensive records.

(4.1) Automation of I. N. B. : Possibilities

The computerisation of the INB will be a major project and will need careful planning, including a very thorough system analysis done locally. It will not be possible to follow blindly the example of the western countries because India has some problems peculiar to this country itself. In the west, a good deal of cataloguing software is available, which would not be applicable to the Indian condition of numerous languages and scripts for the Indian cataloguing system, it will be necessary to design software to suit our requirements. The software and the hardware will have to be locally supported so that it can be maintained easily. Computerisation of the library work in India will require the local system analysis and the librarians to work with concerted effort just as an architect and a librarian work hand in hand to plan and build a suitable library building.

In the context of the INB, bibliographic data means bibliographic records of monograph, periodicals, etc. which should be indexed by their titles, the names of their authors and editors, and by various kind of subject access such as key words, classification scheme notations and terms from controlled language system such as thesauri or subject heading scheme. INB will need a computer system with storage and printing devices and information retrieval facilities. As the present situation stands, it will be necessary to have access to only the most basic computer facilities. A minicomputer with storage and retrieval facilities in magnetic tape and a

printer will be the basic requirements. A COM (computer output micro-form) Unit would be an additional attraction for the output.

(4.2) *Cataloguing Format*

The format to be followed by the INB should be close to the internationally accepted formats. It will be essential to use a standardised format which other data bases can also use. In the 1960's, the BNB and the Library of Congress developed the MARC exchange format. MARC is a generic name for the system of tags used by many national libraries around the world. It is meant to produce the record for the library catalogue or national bibliography. Many countries have their own individual MARC format which are to a greater or lesser degree compatible. The IFLA sections on Cataloguing and Mechanisation joined forces to produce an international MARC format known as UNIMARC. The order of tags was rearranged and UNIMARC looks to be a more general purpose format than the individual MARC formats. The formats of AGRIS and INIS owe various features to MARC. The abstracting and indexing community are using the UNISIST Reference Manual to facilitate the transfer of bibliographic data between data bases.

Most of the countries have modified the MARC FORMAT to cater to their specific needs. Most of the University libraries in the U. K. have simplified the MARC format to their individual needs. The Loughborough University of Technology where the author was able to study for some time uses the MINICS (Minimal Input Cataloguing System) format. Though derived from the MARC, it is less complex and caters to the cataloguing needs of an academic library. The emphasis is upon minimal input as distinct from the MARC format. The number of field tags are much less in the MINICS format and the field definitions are different. The presentation of data in the MINICS and MARC format is given in Appendix A.

For the Indian context, it will be advisable to follow a suitably modified international format, which can be accepted by other data bases. In this connection, it will be essential to use the AACR 2 Cataloguing Rules and the International Standard Bibliographic Description (ISBD), which are used in all internationally accepted formats. The International Standard Book Number, whenever it is uniformly applied in India, should be used in the format too.

(4.3) *Other Problems of Computerisation of the I. N. B.*

(4.3.1) *Multiple languages*: The main difference between the INB and other national bibliographies is the number of languages and scripts. The INB includes books of the languages, which are transliterated into

Roman script. This involves several diacritical marks. The presence of diacritical marks in the INB entries is generally supposed to be a handicap to computerisation. The advancement of computer technology in India now permits the inclusion of several diacritical marks. There may be need to forgo some diacritical marks or alter some of them but it will be worth sacrificing some of them if the INB can become as regular as its western counterparts.

(4.3.2) *Hard Copy* : The output in a hard copy form requires a printer with upper and lower case facility because the bibliographic records consist of capital and small letters including italics. This should not cause problems because such printers are now available in India.

(5) *Advantages of Computerisation of the INB*

(a) If the INB can be an up-to-date publication it will serve as a very effective tool in current bibliographic control.

(b) Computerisation will assist in the production of more accurate bibliographic records than by manual methods.

(c) A retrospective bibliography of INB should be made from its start in 1958 to the present time. Its computerised form will store data and retrieve information quickly. This can serve as a quick reference tool for scholars. It can provide information to other countries by being internationally exchanged. B.N.B. has a similar retrospective bibliography from 1950-1975. It is available on microfiche. This has been purchased by several libraries.

(d) The staff of the INB would be free from several clerical and repetitive jobs. The staff could thus devote extra time to other functions and possibly bring out other bibliographies.

(e) Computerisation may need to alter the subject indexing system. Chain Indexing which is currently used may need to be replaced by the more elaborate PRECIS Indexing.

(f) India will be able to exchange bibliographic data with other national bibliographic centres. This will help in disseminating information quickly.

(g) Computerisation will bring in no reduction in staff as feared by many in India. In fact, a couple of persons with computer knowledge may be employed in addition to the present staff. Computerisation will aid in presenting accurate bibliographies and permit India to have its rightful place among the national bibliographies.

Conclusion

While developing the concept of national bibliographic control in India, it will be essential to apply modern technology. Computer-based national bibliographic services are the acute need of the day to avoid isolation from the technologically progressive national bibliographies. With computer help, it can be hoped that in the future INB will become the definite guide to India's literary output and play an invaluable role in Universal Bibliographic Control.

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APPENDIX 'A'DATA IN MINICS FORMAT

Tag no.
 10 085685087 <<
 24 * 0027.63 * 1027.625 <<
 26 * 0 Lucas, L *1 Karrenbrock, M.H <<
 31 † The † disabled child in the library <<
 32 2nd ed. <<
 33 by L.Lucas and M.H Karrenbrock. <<
 37 Libraries Unlimited, <<
 38 1983. <<

DATA IN MARC FORMAT

Tag no.
 021.00 \$a 085685087 #
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 082.00/1 \$a 027.625 #
 100.10 \$a Lucas \$a L. #
 245.12 \$a The disabled child in the lib
 \$c by L.Lucas and M.H. Karrenbrock #
 250.00 \$a 2nd ed. #
 260.00 \$b Libraries Unlimited \$c 1983 #
 700.10 \$a Karrenbrock \$h M.H. #

MINICS is a simpler, modified form of MARC. This shows the Field tags are less complex and easy to handle. MINICS format has about 40 Tag numbers. The Indian MARC format would have about 40 Tag numbers also.

Cataloguing	Input	Sheet	(MINICS)	Format
M	▽	1866/8	0/	Act m/x s/c cs 02 03 04 05 06 07 08 09
◀81 i*W33708		◀82 Coultis		◀85 5.45 ▶88 790522
◀89 *R360		◀03		◀10 ▶14
◀22	23		◀24*° 616.891(∠)	*1 150.1982
◀26*° Tagan, J		*1 Shepherd. I (∠)		
◀28*				
◀29/30				
◀31 Gestalt therapy now				◀32
◀33 edited by J. Tagan and I. L. Shepherd.				
◀37 Science and Behavior Books,				◀38 1970.
◀45/47				< >

INDIAN INFORMATION SOURCES : SOME ISSUES ON BIBLIOGRAPHICAL CONTROL, ORGANISATION AND DISSEMINATION

T. S. RAJAGOPALAN AND T. N. RAJAN
INSDOC, New Delhi.

Abstract

Identifies some of the more important issues of developing bibliographical network for India. The issues discussed are study of knowledge generating activities, assigning responsibilities to institutions to handle specific areas of bibliographical control and organisation, collection development assigned to institutions on specific areas, development of national standards for processing of information, application of information technology to the development of bibliographical network, provision of document delivery system and development of suitable manpower. All these issues are discussed against the background of existing Indian conditions and looking at the future, emphasising modernisation.

Introduction

A nation's progress and prosperity have a close correlation to its capacity to use information/knowledge for social, economic and cultural advancement. Possession of capabilities to generate, process and disseminate information as well as to operate advance communication systems is a precious indicator of development. The 'information rich' countries are undoubtedly materially rich. With growing facilities to access recorded information/knowledge and with vast capability to make effective and fuller use of them, these countries are endowed with potentialities to become still richer. In the Indian context, information availability and use have been recognised as an important factor of growth, as is evidenced by the creation of a number of knowledge generating institutions in the last four decades. The value of scientific and technical knowledge/information was eloquently articulated by Pandit Jawaharlal Nehru in our Scientific Policy Resolution (1958). This classic document succinctly points out that "it is only through scientific approach and method and the *use of scientific knowledge* that reasonable material and cultural amenities and services can be provided for every member of the community". It is very clear from this statement that systematic development of our *knowledge base*, its appropriate dissemination through various types of primary and secondary publications and its accessibility for effective use are basic foundations for growth and development.

1. Indian situation as a Backdrop

In the use of information, particularly in scientific, technological and technical fields, India has been depending heavily upon foreign sources. A

major part of our information inputs in these fields is being met by importing foreign information/knowledge, as our indigenous production has been very small. However, in social sciences and humanities, the situation is better and our indigenous information outputs are steadily increasing. Moreover, in the last few years, there has been a greater emphasis on self-reliance, indigenous efforts, upgradation of national capability, etc., focussing on attention to developing indigenous systems of information availability and use. The diverse nation building efforts being carried on, have been making a tremendous impact on the generation, production, dissemination and utilisation of recorded information and knowledge. In taking stock of the existing situation, as far as recorded information is concerned, the accompanying table gives a rough idea of the quantitative measures of output. Alongside, bibliographical control of domestic output has received some measure of attention, even though comprehensive coverage of total materials is yet a far distant goal. No doubt, there exist now several bibliographical services relating to Indian sources of information. But in a stage of development, they have grown in a way lacking in coordination, uniformity, standardisation and quality. While duplication of efforts is not uncommon, there are gaps in the bibliographical control of certain categories of material. All these services have been planned and organised along conventional methods and practices. On the other hand, computer and communication technologies have now revolutionised the approaches to bibliographical methods and practices. It is important for us to consider now the new opportunity and the challenge thrown by modern information technology and in that context, to redesign our bibliographical services appropriately for a greater thrust.

It is a known fact that Indian contributions to human knowledge are not being made known to the rest of the world to any desired extent. For that matter, there is a tendency among scholars, particularly scientists, to publish their findings in foreign sources, with the belief that they will then only get international appeal and recognition. Inadequacy of our national bibliographical services as a feeder to international services, is one of the important reasons for Indian contributions not being noticed systematically in foreign sources. In the interest of our own scholarship and learning, it is essential that Indian contributions are disseminated widely and that they form part of international pool of information/knowledge. It is relevant to recapitulate here the features of present day global information systems. Decentralised input, centralised processing and again decentralised dissemination are the strategies of global information systems. Thanks to modern information technology, the universal bibliographical control, which was once thought to be difficult, is now easy of accomplishment. Our national bibliographical efforts require to be restructured and better organised in order to facilitate linkages to global information systems and international information networks.

2. *Some Issues*

If our aim is to bring all kinds of recorded information under effective bibliographical control, the only course open to us is to modernise our approaches and to use information technology in a big way, with a sense of urgency. In this connection, the following issues merit consideration :

- (i) Thorough study of knowledge/information generating activities in the country and of kinds, quantity and quality of resulting outputs ;
- (ii) Assigning responsibility to carefully chosen institutions to handle the tasks of bibliographical control and organisation on the basis of different kinds/classes of recorded materials, so that the total national bibliographical endeavours are shared in a distributed network ;
- (iii) Acquiring/collecting systematically and promptly and in a comprehensive manner locally generated information sources. To ensure this, there should be not only legal provision or executive directives or mandatory stipulation but necessary conditions should also be created for efficient implementation and operation of the collection mechanism ;
- (iv) Development of national standards and applying them for processing different kinds of documentary outputs for recording and exchange. In this connection, consideration should be shown to the existence of a number of languages, scripts and such other peculiarities ;
- (v) Creation of Indian Bibliographical Network as an ultimate goal. This calls for a well defined programme and a firm commitment to implement it. The steps involved are :

Development of software packages for computer processing of various kinds of records to generate and maintain bibliographical databases.

Selection and provision of appropriate hardware systems for the software package developed.

Institutions which are assigned responsibility for handling different kinds/classes of bibliographical records to be provided with common software as well as hardware systems, in order that integration of efforts is achieved.

Establishment of an Indian Bibliographical Network, which will store in machine readable form all databases of locally generated records of information and make them accessible to the public for current and retrospective searches. To

begin with, the service will be in batch mode. When telecommunication facilities become available for this kind of activity, it will be an online facility.

- (vi) Provision of a document delivery system in a distributed network;
- (vii) Development of suitable manpower for operating computer based bibliographic information systems.

2.1. *Generation of Information/Knowledge*

Individuals who form the society and institutions to which they are affiliated are responsible for generation of information/knowledge. There are various levels/kinds of individuals and institutions. Their growth and development contribute to qualitative and quantitative measures of bibliographical output of country. Generation and recording of information, through a starting point in information-communication activity, are very much linked to the process of ultimate bibliographical control. It would, therefore, seem relevant to make a thorough study of all information/knowledge generating activities of the country. In the organisation of national bibliographical efforts, a clear perspective of the kinds, quality and quantity of resultant outputs of information/knowledge activities is necessary. The national bibliographical efforts should provide for a dynamic approach in order to foresee and cope up with the future growth pattern of information/ knowledge.

2.2. *Distributed Network*

The bibliographical control of nation's records of human communication could be comprehended by many aspects/approaches, as follows :

By Kind

Printed books
Periodical articles/
Microliterature
Conf. Proceedings
Patents
Standards
Thesis
Manuscripts
Maps
Photographs
Sound and audio-recordings
Visual images—stills
Visual images—moving
Visual images—with sound
programmed materials

By Source

Commercial publications
Official documents
Society publications

By Subject

Sciences
Social Sciences
Humanities
Law
Business
Education
Agriculture
Medicine

<i>By Level of Exposition</i>	<i>By Type</i>
Advanced/scholarly/research	Primary
Technical	Secondary
Semi-technical	Reference
Popular	Textbooks
Children	
<i>By Language</i>	
<i>By Period</i>	
Early period	
British period	
20th century	

If our aim is comprehensive bibliographical control of total national output, it is obvious that no single institution can handle all by itself the above mentioned categories of records of communication. It is, therefore, suggested that the total bibliographical efforts may be shared among many institutions/agencies, according to a well conceived and agreed upon plan of action. Already some such pattern exists in our country, wherein a number of institutions/agencies are engaged in bibliographical services relating to national output in the fields of their concern. It has to be only formalised ensuring thereby a commitment to operate and offer the services, following certain common standards, norms and guidelines. In the plan of action, duplication, if any, could be eliminated and gaps, if any, could be sought to be filled up by identifying appropriate institutions and entrusting them with the responsibility.

2.3. *Collection Mechanism*

Comprehensiveness in bibliographical control is dependent upon the mechanism of acquiring and collecting information sources, as and when they are created. There could be legal provision, executive directives and such other mandatory stipulations to support the collection machinery. If imperative, the materials could be purchased. It seems that the way in which our society is governed with a lot of freedom or autonomy, may not allow any rigid measures to be adopted in the collection mechanism. We have the example of the Delivery of Books Act to support the Indian National Bibliography, where the implementation of the legal provision has not been satisfactory. All possible methods have to be, therefore, tried. Incentives like assignment of ISSN and ISBN and preparation of catalogue at source may induce the publishing bodies to make available their publications. If bibliographical services are firmly established and credibility is earned, the publishing bodies, in the interest of publicising and featuring their new publications may volunteer to send publications for bibliographical control. There should be all out efforts to watch for newly published material and to acquire them systematically. We have the

example of Library of Congress book procurement operation in our country. It is known for its efficiency in tracking new publications and acquiring them. Collection of information sources is an issue which needs a thorough investigation in order to find out workable solutions.

2.4 *Standardisation*

If we have to aim at the target of total national bibliographical control through a system of decentralised/distributed responsibility, standardisation in design, techniques and methods is a pre-requisite. Our immediate task would be to prepare national standards, guidelines, codes and manuals for bibliographical data representation, compatible with international standards such those of ISO/TC 46 and UNISIST. The Indian Standards Institution EC 2 Committee has also been engaged in the task of formulating national standards in this area. This Committee should now pay earnest attention to evolve common input format in respect of different categories of bibliographical records for machine processing. We have also some special problems such as many languages and scripts and peculiarities of Indic names. A common code/practice has to be evolved to tackle such problems. Compatibility in computer software and hardware systems is very important and this aspect is discussed in the next section.

Formulation of national standards is only a first step. More important is strict adoption of national standards in actual practice. Though there is an awareness to the need for standardisation and for formulation of national standards, we have not been serious enough to follow agreed upon standards in actual bibliographical work and adhocism continues to prevail. This situation must change in the interest of economy and efficiency as well as network development.

2.5 *Indian Bibliographical Network and Application of Information Technology*

It is now time for us to conceive and work towards creation of an Indian Bibliographical Network, by making fuller use of information technology. A number of countries have already made a good progress in establishing bibliographical networks with links to international centres. During the Seventh Plan period, it is expected that INDONET and NICNET will be established in our country to provide for computer-based network. They will offer facility for distributed data processing and consolidation of Management Information System, on an all India basis, for organisations disbursed throughout the country. On a similar pattern, the Indian Bibliographical Network could be evolved. It may be complementary to or integrated with INDONET or NICNET.

It is assumed that, in the development of Indian Bibliographical Network, responsibility for generation of databases for various categories of

bibliographical records will be distributed among various organisations according to agreed upon profiles. In other words, database generation will be a decentralised/localised activity.

2.5.1 *Software Development*

The first and foremost consideration in database generation is software development. In this, the options are : (i) to make use of readymade software ; (ii) to obtain already written software and tailor it to our particular need, and (iii) to write our own (or have it written) specific software for bibliographical or textual databases. Software development takes time and effort. It would be, therefore, worthwhile to make use of already available software, if it will serve the purpose. Some well known software packages suitable for bibliographical databases CDS/ISIS, MINISIS and IV+V. CDS/ISIS which is available from UNESCO is essentially written for main-frame computer system. It is being used in many UN information systems. It is understood that microprocessor adjusted version of CDS/ISIS is now available. MINISIS software package has been developed by INRC, Canada. But it is not system independent and operates only on HP 3000 computer system. However it is a tried and tested software with user friendly features. It is widely used in many countries for library and information work. The IV + V software package is being developed by IMD in Gratz, Austria. It is being promoted by UNESCO for application in microprocessor system. It is said to be portable or system independent, with only a minor conversion step which uses a P code. It is unfortunate that we have not so far made any serious attempt in our country to develop such software packages for use in bibliographic database creation.

In the case of first option, namely using a readymade software, we seem to have CDS/ISIS and IV+V packages. Availability of microprocessor adapted version of CDS/ISIS is of a recent origin. IV+V package may take about one year to become available in field use condition. Regarding the second option, namely tailoring an already written software for our specific requirement, MINISIS could be considered. Here, the modification will be to make the package system independent. The National Informatics Centre is said to be contemplating such a move. It may however, be noted that even IDRC is not keen to modify the MINISIS programme to make it system independent. It seems that there is a proposal to produce HP 3000 computer system in our country with a tie-up with the foreign manufacturer. If this proposal materialises (in 1986), MINISIS Packages can be used, as a first option and the problem could be solved conveniently. UNESCO(PGI) has brought out a World Inventory of Software Packages (1983) for application in library and information field.

This compilation may be consulted to identify already written software programmes for purpose of tailoring to our particular requirements. It would seem that we have to work essentially upon the third option. This may be a practical course in the existing situation. Computer specialists/organisations in our country may have to be approached for assistance and prevailed upon to write specially programme packages for bibliographical database generation. While developing the software package, consideration should be shown to the fact that the databases will be created locally in microprocessor system and that they will be integrated finally in the national bibliographical network. The writing of software programmes for bibliographical database generation should receive highest priority.

2.5.2 *Hardware*

Today's microprocessor/microcomputer systems offer infinite capability to process, store, access and retrieve large volume of bibliographical data which were hitherto possible only through mainframe computers. They are relatively inexpensive and for that matter, even small organisations could afford them to meet their computer needs locally. In our country, we have now several brands of locally produced microprocessor systems. These are available easily with all peripheral devices. A 16-bit, 256 K microprocessor system is well suited for small scale database generation. The microprocessor systems are also capable of being linked to other computer systems in a network.

It is proposed that all institutions, which are assigned the task of bibliographical control of certain categories of materials, may be provided with a suitable microprocessor system for purpose of processing the bibliographical data and storing the information in machine readable form to create databases. The selection of microprocessor system has to be made carefully, as there are many competing interests from the manufacturer's side.

2.5.3 *Compatible Software and Hardware*

As mentioned earlier, the total national bibliographical effort is proposed to be distributed among many institutions. These institutions, besides collecting the records of information relating to their profiles, will process through computer the bibliographical data to generate databases in machine readable form. It is strongly advocated that the software to be used by different institutions for database generation be common to all, so that not only time and effort will be saved but also exchangeability and integration of processed data will be facilitated in a network. Similarly, a common hardware system may be opted by all. This compatibility will ensure use of a common software package. Planning, selection, acquisition and manpower training will also become a single effort in this process.

2.5.4 *Indian Bibliographical Network*

The distributed database generation activity for various kinds of bibliographical records will be consolidated in a single location to form a national level facility. This national focal point may have a bigger computer system to store a large volume of data input by the distributed centres and to offer current and retrospective searches. This host computer system will be connected to the microprocessor systems of the distributed centres for inputting data as well as for switching information. On-line, interactive searches for current and retrospective information held in the store can be undertaken in the national focal point in response to queries from the public. This may, however, be possible only when telecommunication links are provided. It may take a couple of years more for us to have necessary telecommunication facilities. Till then, the distributed centres may have to feed the currently input data in magnetic tape for consolidation in the national focal point. The service to be offered by the national focal point will also be in a batch process.

The distributed centres can, at their level, offer services from the databases held in their store. The current input to the databases, after processing, can generate a computer print-out, in a manner required, for direct offset reproduction, in case it is planned to issue regular periodical publications in a printed form.

The foregoing description of the role of distributed bibliographical centres and the national focal point will, in essence, mean the Indian Bibliographical Network. When this is fully developed, we will have an efficient system of bibliographical control, organisation and dissemination of Indian sources of information. Our national bibliographical services may have to be redesigned appropriately and structured properly, with a view to establish the Indian Bibliographical Network in very near future.

2.6 *Document Delivery*

Bibliographical control is only a means and not an end. The user's information needs are not satisfied in knowing merely about the existence of a document through bibliographical details. He requires actual provision of documents to seek information/knowledge. The concept of Universal Availability of Publications (UAP) has, therefore, aroused a wide interest and assumed significance now-a-days. It is realised that all modern information services, which more often point out to the sources of information, require document delivery support. For that matter, the distributed bibliographical centres should assume responsibility for providing copy of documents either on loan or in the form of photocopies, to whomsoever interested. This is an essential provision for delivering information to users. Otherwise, the national bibliographical efforts will be incomplete.

2.7 *Manpower*

As proposed earlier, if we have to establish the Indian Bibliographical Network by making use of Information Technology, suitable manpower required to operate such a system is to be provided for. At present, persons engaged in bibliographical work are essentially drawn from the library science field. Most of them do not have computer background or experience. This may pose as a constraint to switch over to computer application in bibliographical work. The problem has to be solved by inducting Computer Science oriented persons in bibliographical work. The attempt can be either to retrain the existing personnel with library science background in computer application or to employ fresh Computer Science persons and give them orientation in bibliographical work. Without further elaborating this issue, it is reiterated that suitable manpower for computer application is essential and has to be developed.

3 *Conclusion*

The foregoing account is not claimed to be exhaustive of all issues which need consideration in the matter of bibliographical control, organisation and dissemination of Indian information sources. Only a few issues which have a bearing on the introduction of Information Technology have been highlighted, with a specific purpose of looking ahead towards modernisation. While it is certain that the other papers being discussed in this seminar will contribute to a substantial body of knowledge in the area of national bibliographical control and organisation, our paper, it is hoped, will add a dimension from the point of view of application of Information Technology.

TABLE
SOME DATA ON BIBLIOGRAPHICAL CONTROL OF INDIAN SOURCES OF INFORMATION

Serial No.	Primary information Carrier	Approx. Annual input	Title of Secondary Publications	Institution	Coverage Scope Periodicity	Remarks
1	2	3	4	5	6	7
1.	Printed Books	11,562 (in 1981)	Indian National Bibliography	Central Reference Library, Calcutta.	Includes all books received under Delivery of Books Act. Books in 14 languages are covered. All new periodicals are reported. Publishers list given. Ephemeral material not included. Monthly, Annual, 2-yearly and 5 yearly cumulation.	Not fully exhaustive. Not current Not yet processed through computer. Production system to be modernised.
2.	Periodicals	8,240 (1981)	Press in India	Registrar of News papers. Ministry of Information & Broadcasting, New Delhi.	Covers newspapers, periodicals, serials etc, in 84 languages. Information obtained through statutory provision of registration. Annual	Not produced with professional competence. No subject break-up Timelag about 2 years Entry not detailed No provision yet for ISSN Manually processed and prepared

1	2	3	4	5	6	7
3.	Research and Technical papers and documents in Science and Technology	About 40,000-50,000 items	Indian Science Abstracts	INSDOC, New Delhi.	Includes periodical articles, patents, standards, thesis, reports, proceedings, etc. of Indian origin UDC-classified Monthly computer prepared indexes and annual cumulations Provides abstracts Monthly	Not comprehensive yet in coverage Not current in reporting Not processed through computer (except indexes)
4.	Conference Proceedings in Science and Technology	About 800 in 1984	Directory of Forthcoming Conferences/Symposia/Meetings/Workshops in S & T in India	Department of Science and Technology, New Delhi.	Coverage to the extent available through secondary sources. Provides subject and location indexes. Once in 2 years Available free	No systematic arrangement Coverage not comprehensive Periodicity too long
5.	Dissertations	About 4,000 (1984)	University News (under a heading Theses of the Month)	Association of Indian Universities, New Delhi.	Reports about dissertations accepted by Indian universities. Once in 4 months Available free	Not timely. No abstracts given. No cumulation. No depository.
6.	Patents	About 2,000 (1984)	Gazette of India Pt. III Sec. II	Patent Office/Manager of Publications, Government of India.	All patents filed in India including those by foreigners Provides information under headings Patents Filed and Patents Accepted Weekly	No abstracts. Not a conventional and exclusive too. No cumulation

PROCEEDINGS OF THE SEMINAR ON BIBLIOGRAPHIC CONTROL IN INDIA

A National Seminar on the Bibliographic Control in India was convened under the auspices of National Library, Calcutta, Raja Rammohun Roy Library Foundation and Central Reference Library, Calcutta on the 25-26 February, 1985. This Seminar had the same topic, discussed at the earlier seminar convened by the Indian Library Association, 29 years ago at Calcutta. While the earlier seminar was significant as it focussed for the first time on this issue on a national scale, this Seminar served to recapitulate the efforts made by the various individuals and agencies in this direction during this twenty-nine years and to arrive at a workable programme for an effective bibliographic control. The futuristic study of the use of computers in this field is one of the highlights of the Seminar.

The Inaugural Session, attended by over two hundred persons including thirty-seven delegates from outside Calcutta, was held in the National Library's Auditorium on the morning of the 25th February, 1985. In addition to library professionals, publishers and academics attended the Seminar.

In place of Dr. (Smt.) Kapila Vatsayan who could not be present for the Seminar, Mr. Mohan Mukherji, Chairman of the Raja Rammohun Roy Library Foundation inaugurated the Seminar. Professor Ashin Das Gupta, Director of the National Library, Calcutta dwelt on the need to develop bibliographical system to help the scholarly world and hoped that the seminar would contribute in this direction.

Mr. Mohan Mukherji spoke as follows :

"When the Raja Rammohun Library Foundation was established in 1972, one of its objectives was to draw up a national policy on libraries. The task has recently been completed and the draft policy document is receiving attention of the Department of Culture, Government of India. This document highlights the two major aspects of a national library and information system—viz. (a) service to the reading public and (b) improvements in procedures and in technology ; and one important element of the latter is Bibliographical control. The INB has to adopt measures which will enable it to render services to scholars similar to what scholars receive in developed countries.

In the Foundation's policy document, the existing infrastructure has been taken into account while recommending that close linkage should exist between National Library and Central Reference Library. But it is appreciated that on this issue there can be no difference of opinion.

Performance of the Central Reference Library and the success of INB are dependent upon strict adherence to laws about compulsory deposit of books. In the policy document, compulsory supply of free copies to National Library has been recommended, all other supplies being on demand. Effectiveness of D.B. Act is connected with promptness and regularity in publication of INB and efforts to make authors and publishers feel that indexing in INB is a matter of prestige. For verifying compliance with the law, INB can establish links with State Central Libraries and also Central and State Sahitya Akademies who may have better data about regional language books.

In a poor country seeking to achieve socio-economic development through five year plans, widespread of education is essential and, therefore, public libraries have importance. Funds from the same limited sources can be used for improved bibliographical service only for the benefit of scholars if such funds are used very effectively. The possibility of providing bibliographical service on payment can be considered. The deliberations of the Seminar held at the commencement of the Seventh 5-year plan 1985-90 are sure to lead to valuable recommendations for consideration of those will take major policy decisions".

Ms. Kalpana Dasgupta, Librarian, National Library, Calcutta, introduced the theme of the Seminar as under :

"I have the pleasure of introducing the National Seminar on 'Bibliographic Control in India' which is being held under the joint auspices of the National Library, Raja Rammohun Roy Library Foundation and Central Reference Library, Calcutta. It is a great day for the National Library to hold within its premises a Seminar which is of vital interest to all professionals and scholars. We are very pleased to have amongst us persons of great eminence who have come from distant parts of this large country. It gives me immense satisfaction as the Librarian of the National Library to be able to convene a Seminar like this and to be able to interact with eminent persons from many walks of life.

Librarians and Information Scientists throughout the world have discussed and spoken about the concept and dream of Universal Bibliographic Control from time to time. The most important step to achieve the goal would be to work towards a national bibliographic system which will be eventually the contributing component of a worldwide information system. In the developing countries, the obstacles which Librarians and Information Scientists have faced in trying to work out a bibliographic territory, are cultural, political, economic and technological in nature. In India also the obstacles have been many. I hope this Seminar will examine the retrospective bibliographic control in India as well as plan for a future National Bibliographic System.

The Indian National Bibliography was a major step in the direction of systematic national bibliographic control in India. The mechanism to make this venture a success was mainly dependent on the receipts of the National Library under the Delivery of Books Act of 1954. A hard look at the actual working of the D.B. Act as well as the Press and Registration Act of 1867 and the Copyright Act of 1957 will give us an idea how and why the INB has fallen short of expectations. Interlinked with this problem are also the problems of actual scope and coverage of the INB, the gaps in coverage and the time lag in publishing.

According to the International Federation of Library Associations, Universal Bibliographic Control has been defined as the "Systematic hand-link of bibliographic data from the time a book is printed anywhere in the world until its cataloguing by libraries". This systematic and standardised processing calls for standardised book numbering in all countries which will help in building up an international bibliographic framework. Since India cannot afford to be out of this context the Indian efforts towards this have to be examined very well.

The need for application of new technology for achieving the goal of national bibliographic control cannot be over-emphasised. It is only with due coordination between professional skills and technological development that a network can be thought of. I hope this Seminar will also give us a lead towards the possibility of evolving standardised and compatible technological aid for National Bibliographic Control.

Thank you all for coming to the Seminar."

Mr. H. N. Anandaram (Librarian, Central Reference Library, Calcutta) :

Central Reference Library, though small, has been doing a significant service. Despite twenty-five years of existence it has not been able to grow due to many reasons beyond its control. The Second Five-year Plan envisaged the setting up of the National Central Library at Delhi. This has not materialised. Its present nomenclature has to be changed and necessary facilities given to grow as a National Bibliographic Centre. Some positive steps have been taken in recent years, such as the setting up of a photo-type setting equipment, the printing of the three Eastern Indian language bibliographies and resumption of monthly issues. Recently a Review Committee has been set up to go into the question of its future. This Seminar is an occasion to find solutions for its success as a National Bibliographic Centre.

Dr. B. P. Barua (Director, Raja Rammohun Roy Library Foundation) gave a vote of thanks.

PLENARY SESSION :

Mr. Abul Hasan (Deputy Education Adviser, Dept. of Culture) in his introductory remarks as the Chairman of the Plenary Session said :

Information is one of the basic resources for development and the library is the soul of information. Libraries are not in a happy situation at present in our country. It is a State subject. The Central Government is not directly involved in the library development of the country. There is no infra-structure to formulate library development. The Central Government is keen to develop the libraries and the new Minister for Culture is keen to give importance to this. In her participation in the deliberations of the National Committee for Culture, the late Shrimati Indira Gandhi appreciated the need for library development. The working group of the Seventh Plan of the Department of Culture is considering the position of libraries. There are three Central Acts, Press and Registration Act, 1867, Copyright Act, 1957 and D. B. Act, 1954 and a Committee has recently been set up to review the situation and to make them more effective than they are at present. In the Seventh Plan, finalised recently, enough provisions for libraries have been made. The finance for the first year is twice that of the money allowed for the first year of the Sixth Plan. It will initiate new schemes, especially new areas hitherto neglected. The Government is not going to launch a national library movement but efforts will be made to lay down the foundation for national library movement. The Bibliographical Control before 1958 and after 1958 will have to be discussed not on the basis of language but as a group. Even materials other than books will have to be bibliographically controlled but major part of the discussion should be on INB. As regards the INB a lot remains to be done. INB is not so bad when compared with similar efforts in many of the third world countries where no national bibliographies exist and even if they do, they are neither comprehensive nor up-to-date. But it does not mean all is right with the INB. There are avoidable delays. Why should the printing of INB be done at distant places? If timeliness is essential there is no reason why it cannot be printed at Calcutta itself. The procedural lacunae in receiving books at the National Library under D. B. Act will have to be minimised. The cross section of different professions namely academicians, librarians and publishers are participating in the Seminar. There is hope that the deliberations will be useful in evolving a system of bibliographical control and thereby promote the library development in the country.

Ms. Kalpana Dasgupta (Librarian, National Library, Calcutta) :

Before universal bibliographical control can be a reality we have to create a workable and compatible national bibliography mechanism. The task of developing a national standardised library system is very difficult to

achieve. In the Indian context, efforts of bibliographic control are varied. Lack of standardisation makes it difficult to bring about the use of INB in real terms. There is failure of D. B. Act. None of the three Central Acts do what is expected of them. Gaps in coverage in INB is glaring. Cataloguing scope and coverage of INB have not been properly planned. The gap in INB leads to gaps in awareness of what is to be. International Federation of Library Association's definition of Universal Bibliographic Control (1973) is a system of handling from the time of printing to cataloguing. This has developed into ISBD and related development towards standardised process of each bibliographic unit. The National Bibliography will have to be geared up to the development in technology. Use of new technology through a standardised, centralised automatic provision of cataloguing has to be employed for the National Bibliographic Control. MARC data base format will have to be generated. Some concrete proposals are (i) Methodology for standardised processing system, (ii) Alteration/modification of different Acts, (iii) Re-definition of scope and coverage of INB, (iv) Methodology of standardised automatic bibliographic system for INB and the National Library in co-operation with the libraries with large collections.

Discussion :

Mr. Jogesh Mishra (Chief Librarian, Indian Statistical Institute, Calcutta):

If we can know the bottlenecks in the production of INB, the discussion can take place as to how best we can cope with them.

Professor Ashin Das Gupta (Director, National Library) :

Important reference works such as INB can reflect the publishing activities of the country. Why INB does not come on time, why we do not get books from the publishers are the basic issues. The procedural delays and other problems standing in the way of effective bibliographical control can be resolved and the Seminar can bring to light how best bibliographical control can be effected.

Miss Anand (Punjab University) :

It should be known first as to how the D. B. Act is violated and what corrective steps have been taken by the National Library. Have any steps been made? What has the National Library done for the control of the dissertations which inter-University Board is doing leisurely? Can we link Copyright Act with D. B. Act?

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture) :

Copyright Act is not relevant to our problem as no compulsion is

attached to it. The registration of the manuscript, more than the book is voluntary. Department of Culture is exercising its mind on the working of the D. B. Act. It has set up a Committee to see how they manage the acts or combine them into one. The main lacunae is that there is no penal provision sufficient enough to act as a deterrent to defaulting publishers. But the punishment is not the only answer. Awareness on the part of publishers as to how their publications get publicity free of charge is lacking. Postage expenditure is also a fact weighing with the publishers in delaying the delivery of their publications.

Ms. Kalpana Dasgupta (Librarian, National Library, Calcutta) :

Apart from sending reminders to the publishers, the National Library could do no more as it is not possible to give deterrent punishment to the defaulters. In October 1984, a deliberate attempt was made to bring into fore this problem by having a meeting of the recipient librarians. The communication gap is tremendous especially with small publishers. Postage expenditure by registered post exceeds often the price of their publications.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture) :

Are there any institutions other than mentioned by Ms. Anand which are engaged in the bibliographic control of dissertations ?

Mr. K. C. Tyagi (ICSSR, New Delhi) :

At the request of ICSSR, Indian Universities supply the social science dissertations to them and these are included in the bibliographies published by ICSSR. The Association of Indian Universities has been publishing in a cumulated form the published thesis in a number of subjects every now and then.

Mr. Kanubhai Shah (Librarian, Gujarat Vidyapith) :

State Central Libraries should be associated with the National Library in getting information about publications.

Dr. B. P. Barua (Director, Raja Rammohun Roy Library Foundation) :
(Presenting his paper 'Overview of the importance of National Bibliographic Control') :

Bibliography is defined as an access to source of information. Universal Bibliographic Control is a condition for Universal Availability of publications. There are two types of bibliographic operation—current and retrospective. No bibliography can contain all references. In addition to INB we require all other types of bibliographies. INB's coverage should include other forms of reading materials and languages not included in the eighth schedule of the Constitution. Scholars are mostly interested in subject bibliographies. Except for ICSSR, there is no agency to control bibliographically the thesis other than Social Sciences. INB should be comprehensive and the current publications should be noticed within the

succeeding year of their publications. The time lag should be reduced to the minimum. Retrospective bibliographies is a gigantic problem as it has cover by periods, languages, space and subject. UNESCO's fiat to Universal Availability of Publications make it necessary to publish current National Bibliography as a component of it. MARC formats with suitable information relevant to our needs should be evolved. National Bibliographic System within the National Library system should be developed. A permanent Policy Advisory Committee should be there to ensure effective Bibliographical Control. National Library has a role to play in bringing out retrospective bibliographies and the National Union Catalogues.

Discussion :

Dr. Jayasri Chaudhury (Central Electronics Commission) :

What efforts have been made in respect of computerisation of INB ? Has it been included in the Seventh Plan ?

Mr. H. N. Anandaram (Librarian, Central Reference Library, Calcutta) :

It is not possible to say when we will be able to do it. Mr. Downing (former Deputy Editor, BNB) counselled him in 1982 that till INB was made upto-to-date, he should not resort to computerisation. His remark is relevant to-day.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture, referring to Dr. Choudhury's remarks) :

Sufficient fund in the Seventh Plan will be made available if computerisation is adopted for the production of INB.

Mr. Arvind Kumar (Akhil Bharatiya Hindi Prakashak Parishad) :

Publishers Association will certainly cooperate to the extent possible. Books are not delivered in time because too many books are required to be deposited by different acts. These acts may have to be amended. Many publishers are not aware of the responsibility in respect of INB and publicity is necessary. By the time INB issues come out, ninety percent of books go out of print. So the INB has only historical value. All the books which have recently been published should be known as soon as they are published if they are included in the INB.

Mr. T. Padmanaban (Tamil University, Thanjavur) :

Tamil University, Thanjavur has been experimenting the computerisation of INB and Index Indiana and has developed software in this respect. Even S. D. I. profiles can be maintained. Regarding the deposit of books, the obstacles are the existence of three acts (described as three devils). The infringement of the act should be made a cognizable offence with deterrent punishment.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture) :

All these acts are innocuous and not 'devils'. D. B. Act is contended

by some publishers as infringing their fundamental rights granted under the Constitution in depositing their publications without compensation. If the Act is challenged in a court of law, it is not known what will be the effect. As regards, Copyright Act, it has been recently amended to contain piracy in publishing. All the three Acts are being reviewed by a Committee which has been set up for the purpose by the Ministry of Culture. Further, not all the recipient libraries have kept the materials received under the D. B. Act in a serviceable condition.

Mr. K. M. Govi (Central Reference Library, Calcutta) :

The original sin in regard to D. B. Act is that it was patterned on a foreign model, a reproduction from the British Copyright Act with some minimum changes. D. B. Act has not been effective due to many constraints. The recipient libraries are not properly staffed. Conserving of Books received under the Act in four places results in a part of the collection not being used properly. For example, many language collections of the National Library remain frozen without being used. The professional opinion has not been very vocal about the defects of centralisation of collections under the D.B. Act. Even the debate on the act in the Indian Parliament in 1954 does not reflect any enthusiasm on the part of many participants to have such an act. The position of INB at one place accounts for its failure. The use of Roman Script has caused, apart from the printing delay, the limited use of INB. There should be rethinking on the structure of INB and working of the D. B. Act. Establishment of depository centres in linguistic regions with the responsibility of publishing the language bibliographies of the respective region is the right solution for the problem.

Mr. S. C. Biswas (Director, Central Secretariat Library, New Delhi) :

Computerisation of INB has been emphasized in the working group report of the Planning Commission for the Seventh Plan period. The equipments available in India are limited and many equipments have to be imported. About the centralisation of bibliographic work, there is the good example of the Library of Congress as the producer of the centralised cataloguing.

Professor Ashin Das Gupta (Director, National Library) :

The regional depositories may be a theoretical possibility but the practical consideration should make us try to find the defects in centralisation and remove them.

Mr. Vijai Govind (Raja Rammahun Roy National Educational Resources Centre, New Delhi) :

Standardized form is necessary for INB which should be amenable to international practice in bibliographic matters. It is necessary that this should

be discussed in a larger forum of professionals.

Mr. U. K. Tikku (Panjab University, Chandigarh) :

Rammohun Educational Resources Centre is not the correct agency to assign ISBN. It is the National Library which should be given the responsibility. The cataloguing rules should be the same throughout the country so that the INB can serve the libraries better. Indian MARC is an excellent idea and an important pre-requisite in a single set of rules of cataloguing based on AACR II.

Dr. Tarun Mitra (Senior Lecturer, Calcutta University) :

What has happened to the National Library Bill which was circulated in draft form in 1975 ?

Dr. Prabhakar Machawe (Director, Bharatiya Bhasha Parishad, Calcutta) :

Regional depository centres for effective working of the D. B. Act are necessary to meet the present situation. Valuable work is being done in regional centres and we are not aware of it. In addition to this, many valuable manuscripts are lying scattered in a number of institutions and in the custody of individuals. These will have to be noticed and pooled. In Rajasthan alone, for example, very valuable Jaina manuscripts are kept in many institutions. Before it is too late, we have to work towards its collection and cataloguing.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture) :

Many useful suggestions have been made. Problems like centralisation *versus* decentralisation have to be sorted out carefully. About the responsibility of assigning ISBN, if it is necessary, it will be given to the National Library. The seminar should see to what extent automation can be employed for bibliographical control.

Technical Session—I

Chairman : Mr. Girja Kumar (President, Indian Library Association) :
Introductory remarks :

Discussion on bibliographical control in India should not encompass only INB because it is not everything. Retrospective bibliographical efforts can be according to languages, periods and subjects. Many agencies in the country are, in fact, engaged in bibliographical activities of different sorts. It is necessary to map out these *vis-a-vis* the efforts of the National Library.

Mr. Harish Gupta (Deputy Librarian, National Library, Calcutta) :
(Presenting the paper on behalf of the Bibliography Division) .

Bibliography Division of the National Library has been functioning for

the past three decades. (Briefly mentions in history). This Division has been functioning as bibliographical information centre of the country, mostly confining its activities to humanities and social sciences. The users have been institutions, universities and government departments (Central and State) apart from the general users. This Division has necessary expertise to handle the vast retrospective material of the Library. Three retrospective bibliographies (as part of its ambitious programme of indological bibliographies) have been published, viz., Bengali literature, Botany and Anthropology. In addition to several bibliographies of small dimension have been prepared every now and then, either on request by readers or for exhibitions.

Regarding the material of mid Nineteenth Century, it has not been precisely known as to how many books were printed prior to 1867. How is this period to be covered and what would be the methodology? The British Museum Catalogues have been of great help in this respect, (cites some of them).

Mr. S. B. Ghosh (Assistant Editor, Central Reference Library, Calcutta) :

Rev. James Long's Bengali Catalogue, Murdoch's effort and such pioneers as dates are not mentioned in the paper presented. C. R. Banerji's '200 Years of Bengali Printing' should help in a number of respects.

Mr. Harish Gupta (Deputy Librarian, National Library, Calcutta) :

The account does not claim to be comprehensive. The paper serves to highlight the activities of the Bibliographical Division.

Mr. S. B. Joshi (Assistant Editor, Central Reference Library, Calcutta) :

One singular important omission is the quarterly catalogue published in gazettes on the basis of the receipt of books under Press & Registration Act, 1867 and this is a very good source for compiling retrospective bibliography of the period after 1867.

Mr. P. N. Venkatachari (Assistant Editor, Central Reference Library, Calcutta) :

The receipt of books in the National Library belonging to the period 1954 to 1957 (just prior to INB's appearance) has not been covered by any bibliographies fully and this gap has to be covered.

Mr. A. M. Sundararajan (Chief Librarian, Connemara Public Library, Madras) :

Government of Tamil Nadu has already published through its Directorate of Tamil Development in 23 parts the books recorded in the Fort St. George Gazette (kept now in Madras Record Office) according to Press & Registration Act. Still the work is going on to complete the rest of the period upto 1947.

Dr. Tarun Mitra (Senior Lecturer, Calcutta University) :

National Library Catalogue should plug the gaps as early as possible.

(Refers to a compilation done by him on the old materials of some of the libraries in the region).

Chairman (Mr. Grijja Kumar) :

Mr. Gupta does not indicate the potentials of Press & Registration Act and the listing under the Act in the gazettes. It is the richest source which has to be tapped. Union catalogue of retrospective documents is a gigantic task in which several institutions should collaborate with the National Library.

Mr. H. N. Anandaram (Librarian, Central Reference Library, Calcutta):
(Presenting his payer) :

In 1955 an Advisory Committee set up by the Ministry of Education under the chairmanship of Shri B. S. Kesavan (former Librarian, National Library) recommended the basic format, script, scope and coverage of INB. Certain categories were excluded from the purview of INB. Languages not covered by the Eighth Schedule of the Constitution were excluded. Sahitya Akademi recognises about 22 languages and ultimately we may have to include as many languages as possible. Recently Index Indiana (the documentation service of selected Indian language periodicals) is being done on experimental basis and ultimately all Indian languages have to be included within the purview of Index Indiana. INB is not comprehensive, as it has to rely on the receipt of books from the National Library. The printing of INB has been very much behind the schedule partly due to the case of Roman script and partly due to its being printed in Government of India Presses and private printers at two or three places. The statistics of books recorded may not reveal the real publishing position of the country (quotes figures). Recently a photosetting equipment has been installed and eight monthly issues (Jan.-Aug., 1984) have so far been published.

A review committee, though appointed as early as 1982, has not met due to certain administrative reasons. The nomenclature of the Central Reference Library has to be changed as the nomenclature of any institution should go hand in hand with the type of service it renders.

Discussion

Mr. T. S. Rajagopalan (Scientist In-charge, INSDOC) :

We have to take lessons from past failings and learn from experience. Speed, coverage and quality should be kept in mind and the speed is the first approach we have to make. INB should wipe out arrears and this should be the first objective. The use of Roman script has its constraints. Production and distribution system have to be overhauled and delay should be cut down to the minimum. Photo typesetting equipment is a good acquisition as part of in-house printing facility. Timely report of new publication must be the watch word of INB. In collection mechanism,

the idea of decentralisation can be examined in depth. If the D. B. Act is linked to decentralisation it may be a practical way of looking at problems. If INB establishes credibility, publishers' co-operation can automatically be obtained. Incentive to publishers may not be monetary. National standards have to be evolved. The present subject indexing in INB have to be given up in favour of such system as PRECIS. Most of the problems of INB is organisational though there is no lack of technical expertise. The system (INB) is more than twenty years old and it is to change it for the better.

Professor Ashin Das Gupta (Director, National Library, Calcutta) :

There are many practical problems so far as getting books from publishers are concerned. Publishers of metropolitan cities and countryside seem to be in two different categories. The former seem to be more co-operative than the latter. If books are not received in sufficient quantity under D. B. Act, should we go to the publishers and collect the books directly from them ?

Ms. Kalpana Dasgupta (Librarian, National Library, Calcutta) :

We must have a clear idea as to what type of materials are to be covered by INB.

Mr. S. C. Biswas (Director, Central Secretariat Library, New Delhi) :

Many official documents are not deposited with the National Library. Similarly maps and other forms of reading material have to be controlled by their inclusion of INB.

Nearly half of Indian publishers seems to be concentrated in big metropolitan cities (Bombay has the lowest number of publishers). A sample study of INB monthly issues of 1984 reveals that maximum entries are of the publications of 1982 and 1983. INB should take notice of the latest publications in its current issues.

Mr. A. R. Sethi (ICSSR) : (presents his paper) :

A comparative study of the Accessions List, South Asia of the Library of Congress contains more recent entries than a corresponding INB issue. In some of the monthly issues of INB, entries of the publications of 1978 are found. Lack of accountability is the cause of the delay in publishing INB. No protest from the public or library profession has been made in this respect. Each of the big libraries in subject fields should be designated as the National Library for that particular subject and be responsible to publish National Bibliography in that subject. Delivery of Books Act should be amended so that these national subject libraries should get one copy each in the subject of specialisation. Publishers may welcome this as only one copy need be sent to a recipient library. Central Reference Library should be shifted eventually to Delhi to be a referral centre.

Mr. H. N. Anandaram (in reply to Sethi) :

Efforts are being made to see how best INB could be published without delay.

Mrs. Pushpaveni Govi (Assistant Librarian, National Library) : (Presenting the paper 'Gap in Coverage of Indian National Bibliography *versus* the published material in Tamil') :

Tamil publishers (about 600) publish one title or two titles in course of one year. About 1,500 titles are published. National Library gets major percentage of books which are then listed in INB. How many escape coverage is the question? When a survey of the annual output with its comparison in terms of inclusion is made, we find that many titles are recorded late in INB. Tools for making a survey are advertisements, published catalogues, books reviews and Connemara Public Library's Tamil Bibliography. Tamil books are not well advertised. Annual catalogues are rare. Only 25 percentage of titles are reviewed. INB list does not include part of the books of the year in the same year. (Quotes figures to prove this). National Library gets all significant publications. Language divisions should be strengthened. Reminders to defaulters should be regularly sent. A new look at the D. B. Act is necessary. National output can be effectively used only in a decentralised structures.

Mr. A. M. Sundararajan (Chief Librarian, Connemara Public Library, Madras) : (Presenting the paper 'The bibliographic control in Tamil Nadu') :

Many books are not received under D. B. Act in the Connemara Public Library. It receives about 50 per cent of the books received in the National Library. Incentives for those who submit books in time should be given. Bibliographies published by the Connemara Library as well as the Tamil Development Council are being published (cites figures). A central agency at states and national levels should be set up to identify the new publications and bring to the notice of the concerned Directors. Efforts made by Connemara Public Library in enlisting the help of Tamil publishers have yielded good results.

Mr. S. R. Gurnani (Assistant Editor, Central Reference Library, Calcutta) : (Seeks clarification from Shri A. M. Sunderarajan) :

Apart from the Tamil books, how are the books in other Indian languages kept in the library as it is reported that books are not processed in those languages?

Mr. A. M. Sundararajan (Chief Librarian, Connemara Public Library, Madras) :

Efforts have been made to put all the language books on shelves with proper cataloguing.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Calcutta) :

D. B. Act is applicable to official publications as much as to the general.

Ministry of Culture will send a circular to impress upon the different departments the need of sending books to the National Library. Publishers may even be requested to send their publications and these may be put on a free mailing list of INB in exchange of their publication. The delay in printing is due to external problems and the Ministry will do its best to help Central Reference Library in this respect. Occasionally Parliamentary questions asked made the Department of Culture to keep in touch with the Central Reference Library and in one such question on the number of Kannada publications, the answer was nil as there was no officer in the Library to record that particular language books. Language knowing personnel is difficult to get at the low salary offered. Delay in fixing price of INB annual volumes is ridiculous and this should not recur again. Sufficient publicity should be given about INB in all newspapers.

Mr. Ram Swarup Verma (Assistant Librarian, National Library, Calcutta) : (Presenting his paper) :

Receipt of Hindi books are next only to English in the National Library. Five years' figure of Hindi books under D. B. Act shows this. Publishers' role in depositing books with the National Library cannot be overemphasized. No bibliographical reference book is available in Hindi.

Mrs. Asoka Shome (Assistant Librarian, National Library, Calcutta) : (Presenting her paper 'Bibliographical Control of Bengali Publication') :

The collection of Bengali books and journals in the National Library is the second largest in the country, the first being the Bangiya Sahitya Parishad.

There is no central book list from which correct information about Bengali publications can be known. According to Press & Registration Act, books deposited with the Registrar of Books is only a small percentage of the total books published. (Cites figures for recent four years). Publishers do not publish any catalogue regularly. The State Central Library select list of books available with them. (*Krayalabhya Bangla Granther Bishayanug Talika*) is also very selective and does not indicate the total number of publications. It is suggested that the Association of Publishers should persuade the individual publishers about their responsibility in depositing copies with the depository libraries.

Discussion

Mr. S. R. Gurnani (Assistant Editor, Central Reference Library, Calcutta) :

National Library should hold seminars in other parts of the country and enlist the help of local publishers, thereby making it possible to get their co-operation in respect of the D. B. Act. Established media like T. V. and Radio should be used for publicising the provisions of D. B. Act. Acknowledgement of books by the National Library should be prompt. The staff of the INB should be sent to regional centres to give publicity to INB and D. B. Act.

Professor Ashin Das Gupta (Director, National Library, Calcutta) :

Getting books from publishers directly by sending persons to centres of publishing may be one way of getting books. Does it not make a departure from the policy inherent in the working of D. B. Act?

Mr. R. L. Anantharamaiah (Editor,) : (Presents his paper) :

Penal action should be taken against defaulting publishers. A book-minded person should be designated in each regional centre as representative of the National Library and authorised to collect books on its behalf. [Narrates his experiences in collecting data for '*Granthaloka*', Kannada bibliography]. Many do not subscribe to his bibliography. Surprisingly the important libraries do not back this project.

Dr. Dilip Mittra (Assistant Librarian, National Library, Calcutta) : (Presenting his paper) :

Map publishing has picked up in recent years (refers to collections and catalogues). Bibliographical control of maps is essential as there is no agency to do it. Indian Cartographic Association has appointed a commission in this connection. INB should include maps as a supplement on the basis of the data supplied by the Map Division of the National Library.

Discussion

Mr. Bimal Banerji (Technical Assistant, National Library, Calcutta) :

Simple reference to maps in INB will not help potential users as many maps are restricted and inaccessible.

Mr. T. S. Rajagopalan (Scientist In-charge, INSDOC, New Delhi) :

Special types of maps such as satellite maps, landstat images should be recorded by some agency, preferably by the National Library.

Dr. Dilip Mittra (Assistant Librarian, National Library, Calcutta) :

Importance of having Union Catalogues of maps has been realised in the Western countries. In India, map librarianship has to be developed. The Government does not give permission for free use of restricted maps. The Survey of India and IIT, Kharagpur have, some time ago, taken aerial photographs in a project connected with the study of the geological evolution of coastal Bengal. These are not easily accessible. Maps are declassified every now and then by the Survey of India and slowly these are made accessible.

Session—I

Chairman : S. C. Biswas (Director, Central Secretariat Library, New Delhi).

Professor Ashin Das Gupta (Director, National Library, Calcutta) : (Speaks on 'An ideal Bibliography : Views of a Scholar') :

Different types of scholars have different approaches to the bibliography.

The first approach of a scholar in history will be the oral literature concerning the area and the manuscripts dealing with them. Many depositories outside India are available for consultation. But many of the historians requirements may be in Indian languages not listed in bibliographical works (cites his own researches as example). A scholar dealing with 18th century historical events can hardly get any help from INB. The existing catalogues of the National Library are not properly indexed to enable the scholar to pinpoint the information.

INB can include mimeographed literature as in many of these references and research material exist. Further the books and articles in different languages should have sufficient annotations in INB.

Dr. Kitty Dutta (Jadavpur University, Calcutta) : (Her paper 'An ideal National Bibliography, a scholar's view' was presented by Ms. Kalpana Dasgupta, Librarian, National Library, Calcutta) :

In Britain, British Museum renders yeoman service to scholars. This should be emulated in India. Microfilming of rare copies should be done as quickly as possible and a union catalogue can solve the problem of a scholar as to where he can get his material.

Rare newspapers/pamphlets should be procured and kept in the National Library. A historian or archivist should be put in charge of the collection.

Discussion

Chairman (Mr. S. C. Biswas, Director, Central Secretariat Library, New Delhi) :

Users' researches are essential to find out the type of requirements made on the libraries. Even the trade catalogue of the academic publishers can be of the help of scholars.

Ms. Kalpana Dasgupta (Librarian, National Library, Calcutta) :

Sufficient annotation of a document has to be given in the bibliography.

Mr. H. N. Anandaram (Librarian, Central Reference Library, Calcutta) :

In INB subject analysis of document are not done to sufficient depths. Many titles of the documents do not give clear picture of the document. We may have to switch over to a better indexing system.

Mr. Vijai Govind (Raja Rammohun Roy National Educational Resources Centre, New Delhi) :

Dissertations should be the source of information for scholars. Bibliographies of theses should help them.

Mrs. Puspavani Gopi (Assistant Librarian, National Library, Calcutta) :

National Library's catalogues are being kept ready for printing and microfilming of manuscripts has also been taken on hand.

Mr. P. N. Venkatachari (Assistant Editor, Central Reference Library, Calcutta) :

Regarding the content analysis of documents produced, the efforts made by the International Institute of Tamil Studies, Madras, deserves attention. The years' work in Tamil is a massive work, containing *inter alia*, information media, such as radio talks, folk literature, folk-lore. Similar efforts should be done in other Indian languages.

Mr. S. R. Gurnani (Assistant Editor, Central Reference Library, Calcutta) :

Rare bookshops contain many valuable research materials which are normally sought by the scholars. As the price of these are prohibitive, the National Library should acquire them. First editions of significant works should also be acquired by the National Library.

Mr. P. B. Roy (Bengal Library Association) :

A scholar's query can be answered from the documentation of periodical literature. Many books contain a number of bibliographical references. These may also give a clue to the needs of a scholar.

Mr. Bimal Banerjee (Technical Assistant, National Library, Calcutta) :

National Library should again continue the bibliographical project in Indology which due to some reason or other, was discontinued.

Mr. Panchu Gopal Maitra (Superintendent, National Library, Calcutta) :

Bibliographical projects, initiated by the National Library in the later half of 1950's were carried out after consulting scholars in the respective fields. But the work did not continue after publishing three volumes—one on Botany, Anthropology and Bengali literature.

Mr. P. B. Barua (Director, Raja Rammohun Library Foundation) : . .

National Library should have close connection with the National Archives. The printed matter contained in the National Library and unpublished manuscripts of the National Archives provides good source material for the scholars.

Chairman (Mr. S. C. Biswas, Director, Central Secretariat Library, New Delhi) :

British Museum record can be consulted through its multi-volumed catalogues in which are contained a very exhaustive amount of information. The National Library should have on its staff the scholars on a number of special subjects.

Mrs. Kalyani Maitra (Assistant Librarian, National Library, Calcutta) :
(At the request of the Chairman to speak about Ashutosh Collection, National Library) :

Ashutosh collection is a very good source of information for scholars.

Many scholars have made use of the well arranged documents of this collection.

Mr. A. R. Tyagi (ICSSR) :

Librarians in India are mostly assigning subject headings according to Library of Congress list of subject headings. This should be modified according to our present needs. Instead of spending energy on classification, more attention should be paid to the subject analysis of the documents.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture) :

INB's scope should be defined keeping in view the scholar's requirements. There are a variety of reading materials, other than printed works which are known. The Seventh Plan, formulated, has taken notes of the manuscript collection of the country.

Mr. Girja Kumar (President, Indian Library Association) :

Bibliographical work meant for scholars can be done according to period, language and subjects. The compilation of such publications should be done with great attention to accuracy and details.

Miss Chitra Mullick (Assistant Librarian, National Library, Calcutta) :

Official publications belonging to the Imperial Library forms an important source material for retrospective bibliography. Provisions should be made in the Seventh Plan period to publish Catalogues of the Official Publication, National Library.

Mr. Narendra Kumar (Vikas Publishing House) : (His paper 'How to bridge the gap in the coverage of Indian National Bibliography' presented by Mr. Arvind Kumar of Hindi Prakashan) :

Strict enforcement of D. B. Act is essential and in this respect the publishers' association should appraise their members the relevant provisions of the D. B. Act, and the publicity they would get by entry in INB. Too many copies are asked to be delivered under D. B. Act. ISBN work should be assigned to the Central Reference Library. For its effective working this library should be shifted to Delhi.

Discussion

Mr. Arvind Kumar (Hindi Prakashan) :

Publishers are to be taken into confidence and they should be involved if full co-operation with the INB is to be achieved. Copies of INB should be sent to them free of cost as against the books delivered under D. B. Act. Publishers should be asked to submit minimum number of copies. Publishers' Associations can bring out their monthly lists well annotated.

Mr. Kanubhai Shah (Librarian, Gujarat Vidyapith) : (Presenting his paper 'How to bridge the gap in the Coverage of Indian National Biblio-

graphy : A Librarian's view point') :

Work of INB should be decentralised. Regional languages should be done by depository libraries. The INB's present coverage (with reference to Gujarati Publications) is far from satisfactory. Automation should be introduced for the production of INB.

Mr. M. N. Nagaraj (Deputy Librarian, National Library, Calcutta) :
(Presenting his paper 'Union Catalogue of Research Material in India) :

'India' as a subject of study has gained importance in academic pursuits all over the world. Still because of the size of the country, materials published in and on the country are lying in many libraries and in individual possessions. Efforts should be made to identify and collate the material. Materials on India published abroad are well documented. A programme of Union catalogue of research material should be launched. Problems are daunting. But a beginning has to be made by a central agency with ramifications of regional and local overtones. Press & Registration Act, 1867 made it possible to bring out quarterly catalogues as appendices to gazettes. Material from this should be collected, collated, sorted and arranged language-wise. Secondly, printed catalogues of libraries should be collated and transferred to a central pool. Physical condition should be indicated for a future programme of conservation and microfilming.

Mr. Vijai Govind (Raja Rammohun Roy National Educational Resources Centre, New Delhi) : (Presenting his paper 'ISBN and Indian National Bibliography : the role of NERC) :

NERC can collaborate with the Central Reference Library by keeping the latter informed about the forthcoming books. There is need for bibliography of bibliographies to identify the gaps in INB. Supplements to INB (for maps, musical scores, audio-visual materials and other hear printing materials) should be brought out. Bibliography of theses can be published as annual supplements of INB. National Bibliographic Centre should be set up in the National Library. Postal relief to the publishers may help in getting books by D. B. Act to the recipient libraries. The ISBN is gradually being adopted by many publishers in their publications.

Discussion

Mr. S. K. Nandi (Junior Technical Assistant, National Library, Calcutta) :

From personal experience with Oriya publishers, it is found that individual publishers are not aware of the D. B. Act. Proper publicity of this Act is necessary. It may also be enjoined that if any purchase of

books is to be made by any government agency, the concerned publisher should get a clearance certificate from D. B. Act Division, National Library, Calcutta.

Mr. P. B. Roy (Bengal Library Association) :

ISBN should be publicised during the book exhibitions/book fairs. Publishers should be registered just as any other commercial concerns. It may be stipulated that they should use ISBN as a condition or registration.

Mr. Abul Hasan (Deputy Educational Adviser, Dept. of Culture) :

A concrete recommendation for the compilation of the National Union catalogue may be made in the Seminar. A committee should be constituted with the Director as the Chairman. The compilation of retrospective bibliography can also be looked into by this committee.

Technical Session-II

Chairman : Mr. T. S. Rajagopalan (Scientist In-charge, INSDOC, New Delhi) :

Mr. T. Padmanaban (Thanjavur University) : (Presents the paper 'Application of modern library technology for current Bibliographic Control') :

Regional legal depository centres are to be set up to collect books under D. B. Act. The postal expenditure should be borne by the Government of India for the copies delivered under the Act. D. B. Act should be strictly enforced and be amended to include certain other reading materials, not covered so far. The printer also should be jointly made responsible for the non-deposit of copies under the Act. The Tamil University, Thanjavur has developed a software for computerisation of INB and Index Indiana. If an opportunity is given to the Tamil University it will be able to bring out INB within the minimum possible time. (Explains with the help of the video the experiments done in this direction).

Mr. K. C. Chellamuthu (Computer Centre, Tamil University, Thanjavur, Presented by Mr. T. Padmanaban, Thanjavur University) :

The Tamil University Computer Centre is equipped with fourth generation micro processor (2.80 micro processor). This computer system is small in configuration with a 64 bytes of main memory and auxiliary storage. The Tamil SDI and Tamil MARC are implemented through the indigenously made computer. Tamil University has developed a library software. (The main features of Tamil SDI/Tamil MARC are briefly explained). Tamil MARC system can provide statistics pertaining to the coverage of period of publications in any desired commutation.

Miss Uma Majumdar (Technical Assistant, National Library, Calcutta)
(Presenting her paper 'Application of Modern Technology for the Control and Development of bibliographical data with reference to Indian National Library : its dream and reality') :

One of the most pressing problems before the National Library is to organise and control the bibliographical data of vast materials in its possession. Several constraints stand in the way of its implementation (briefly mentions IFLA's effort on Universal Bibliographical Control and Vienna's symposium of National Libraries). National Library receives considerable amount of reading material, part of it being recorded in INB. National Library has to assume leadership in the introduction of modern technology for bibliographical control.

It is necessary that Indian MARC should be developed. The present card catalogue should be replaced by MARC in phases. New titles can be brought under MARC.

Miss Harinder Kaur (Assistant Editor, Central Reference Library, Calcutta) :

INB's record is in sad contrast to the British National Bibliography where the achievement has gone to the extent of publications being announced through the cataloguing in publication. Ineffectiveness of D. B. Act is partly attributable to this failure. The success of the National Bibliography rests in the frequency and accuracy of publications which is possible only through the adoption of automation. Printed bibliographies provide only half the answer to the problem. MARC can best serve the purpose. The compilation of INB requires careful planning due to reasons of multiplicity of languages. The software and hardware to be developed have to be locally made available. The format of INB should be as close to internationally accepted form.

Chairman : Mr. T. S. Rajagopalan (Scientist In-charge, INSDOC) :

Hardware to be used, must be modified according to our needs. Computerisation of INB is an inescapable necessity in near future. Diacritical marks, if necessary, will have to be sacrificed and the AACR 2 should be followed and ISBD should be adhered to.

(Presenting his paper '*Indian information sources : some issues on bibliographical control, organisation and dissemination*'.)

Indian contributions to human knowledge are not known to the rest of the world sufficiently due to inadequacy of our national bibliographical services. Decentralisation input, centralised processing and again decentralised dissemination are the strategies of global information system. Due to use of modern technology, situation is not easy of accomplishment. Some of the issues are (a) assigning responsibilities of bibliographical control to chosen institutions (b) proper legal provision to collect information

(c) development of national standards despite our inherent problems,
 (d) creation of Indian bibliographical network with the use of proper software and hardware packages and document delivery system and manpower requirements. National output may be categorised by kind, by source, by subject, by level of expertise, by type of language and by period. So bibliographical efforts may have to be shared by many institutions, agencies. (Each is briefly mentioned.)

Discussion

Mr. A. R. Sethi (ICSSR) :

Certain problems have not been especially stated by Padmanaban in his paper. How can we do away with classification as suggested Padmanabhan ?

Dr. Jayashri Chowdhury (Electronics Commission) :

Limitations of INB in its present form is being studied by Electronic Commission Branch of Jadavpur. Required equipment may not be locally available.

Mrs. Mariam Koshy (Assistant Librarian, National Library, Calcutta) :

Is the National Library prepared to accept all challenges inherent in an effective bibliographical control of publications ?

Mr. C. Dabral (Director, National Medical Library, New Delhi) :

Computerization of medical literature produced in India is underway in National Medical Library. Shortly it will be produced by Computer.

Dr. Jayashri Chowdhury (Electronics Commission) :

The Seventh Plan emphasises the modernization of the library system by the use of computer and it is the appropriate time to initiate changes.

Chairman (Closing remarks) :

The advent of computer in library management, though at an incipient stage in India, will be a matter of reality in course of time. Professionals grown old with manual techniques are resistant to change, understandably as they fear that the country's socio-economic condition does not warrant it. But changes are inevitable for which the future library workers have to gear themselves up.

RECOMMENDATIONS

This Seminar, having taken note of the significance of the Central Reference Library, Calcutta as the national agency towards compilation and production of the current national bibliography of the country, recommends that, in consonance with the nature of the service it does, its nomenclature be changed as the National Bibliographic Centre or equivalent thereof and it be provided with the necessary infra-structure to enable it to discharge its functions efficiently in closest co-operation with the National Library, Calcutta. It is also recommended that in addition to the above, as a part of the National Library complex it shall act as a National Referral Centre and a coordinating agency of other bibliographical agencies of the country.

The Seminar recommends that an advisory committee comprising representatives of library professionals, publishers, academicians, booksellers and authors be constituted to review the question of how best the present structure of Indian National Bibliography can be modified for greater use and faster production. A user study may be conducted by the C.R.L in this respect.

The National Library be vested with the responsibility of compiling a national union catalogue of research materials in India. An advisory committee of all-India character consisting of persons associated with various disciplines be formed to advise and formulate policies for compilation of the National Union Catalogue.

The same committee may further advise the National Library on the compilation of the retrospective bibliographies as a continuing process of the projects begun earlier.

This Seminar strongly recommends the adoption of International Standard Book Number (ISBN) by the Indian publishers and considers that there should be close link between the National Agency for assigning this number (Raja Rammohun Roy Education Resources Centre, New Delhi), the National Library, Calcutta and the Central Reference Library, Calcutta. Wider publicity may be given to the use of ISBN and the benefits accrued from it.

Having noted that two committees have been set up by the Department of Culture (Government of India), one to review the Delivery of Books Act, 1954 and the other to examine all the three Acts (the Delivery of Books Act, 1954, Press and Registration of Books Act, 1867 and the

Copyright Act, 1957), this Seminar recommends that the Union Government be requested to expedite action on eliciting the recommendations of the two committees and their implementation without in any way altering the original purpose for which these Acts were enacted.

It is also recommended that the Delivery of Books Act be amended so that the postal expenditure be defrayed by the recipient libraries to act as an incentive to publishers to deliver the books.

It is recommended that the working of the Delivery of Books Act, for a complete receipt of materials published in the country and the recording of them in the Indian National Bibliography, be constantly reviewed and discussions with the publishers, State Central Libraries and other agencies connected with the book world (National/Regional/Local) at regular intervals be held with a view to determining what has been published for evolving a system for comprehensive bibliographic control.

As awareness about the Delivery of Books Act and the advantages derived by the submission of copies to the recipient libraries is necessary for increased receipts under the Act, the Union Government should undertake an active campaign through various media for promoting this Act. This includes reminders to Government departments (both Central and State) autonomous bodies under the Government, etc.

Having noticed that gaps in receipt of books under the Delivery of Books Act are also due to the language posts being kept vacant beyond a reasonable period of time, this Seminar recommends that the Department of Culture be requested to explore the means of filling up these posts in the National Library and the Central Reference Library as expeditiously as possible, if necessary, by invoking special rules. Sufficiently attractive scales of salaries may serve as an incentive to attract candidates for these posts.

It is recommended that the compilation and production of the Indian National Bibliography and other bibliographical works be so redesigned Library, Calcutta, to bring about economy and efficiency for developing a national network. It should also take note of its compatibility to international standards.

It is recommended that the compilation and production of the Indian National Bibliography and other bibliographical works be so redesigned and restructured that they are amenable to machine operation towards the evolution of the Indian bibliographical net work. In this respect, the experience in our country in evolving machine readable data base such as the one being established at the Thanjavur University be encouraged. A feasibility study in this direction may be initiated jointly by the National Library and Central Reference Library, Calcutta.

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